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ON
GASTRIC SURGERY.

Delivered before the Royal College of Surgeons of England on Feb. 19th, 21st, and 23rd, 1906,

BY HERBERT J. PATERSON, M.A., M.B., B.C. CANTAB., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY IN THE COLLEGE; AND ASSISTANT SURGEON TO THE LONDON TEMPERANCE HOSPITAL.

LECTURE I.

Delivered on Feb. 19th.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—A great writer has said that "no man can write anything who does not think that what he writes is for the time the history of the world, or do anything well who does not think his work to be of importance." If this be true generally, it is not less true in the history of the science and art of surgery, and there is perhaps no branch of surgery in which history has been made more rapidly and our knowledge and practice more distinctly advanced than has been the case with the surgical treatment of gastric disease. I am not so vain as to imagine that anything I may say will mark an epoch in its progress. Indeed, it is with no light heart that I undertake the task of lecturing before this College on a subject which so recently as six years ago was fully dealt with from this very chair. But during this interval advance has been made, although much remains to be perfected. Encouraged, therefore, by those wise and ancient words,

> "The day is short, and the work is great,
> It is not encumbent on thee to complete the work,
> But thou must not therefore cease from it,"

I am emboldened to direct your attention to this subject anew in the hope that in some measure, however small, I may further the progress of this branch of our art.

Gastric surgery is of comparatively recent growth. It was unknown among the ancients. To Hippocrates, bold surgeon though he was, the stomach was forbidden ground and for centuries injuries and diseases of the stomach were beyond the scope of the surgeon's art. The words of Larrey, surgeon to Napoleon, "Les plaies de l'estomac ne sont pas mortelles dans tous les cas," written less than one hundred years ago, attest the dread with which gastric wounds were regarded in the early days of the last century. It was universally believed that wounds of the stomach were prevented from healing by the corrosive action of the gastric juice. Gussenbauer and von Winiwarter, by showing that gastric wounds heal readily when sutured, may be said to have heralded the advent of gastric surgery, which at that time (1876) was practically unknown. To-day its progress is manifested by a literature with which it is almost impossible to keep pace.

One of the earliest gastric operations on record was performed in the year 1602 by Florian Matthis, who removed by gastrotomy a knife which a peasant juggler had accidentally swallowed. The year 1810 witnessed the birth of the germ of the operation of pylorectomy, for in this year Merrem, after resecting the pylorus in dogs, proposed that the operation should be adopted for the treatment of organic disease of the pylorus in man. This suggestion shared the fate of many another brilliant idea, for it passed almost unnoticed and was soon buried in the records of the past. It was not until 60 years later that Gussenbauer and von Winiwarter, after successful experiments, also on dogs, again suggested the feasibility of the operation in man, and three years later (1879) Péan performed the first pylorectomy on a human subject, while two years afterwards the first operation followed by recovery was performed by Billroth. This year (1881) was an epoch-making one in the annals of gastric surgery, for, in addition to Billroth's brilliant success, it was marked by the performance for the first time of the operation of gastro-jejunostomy by Wölfler at the suggestion of Nicoladoni. Indeed, the year may be called the birth-year of gastric surgery.

The road to success has been thickly paved with failures. Although Sédillot performed the first gastrostomy in 1849, it was not until the year 1875 that a successful case of this operation was recorded. To-day it is difficult to realise that less than 15 years ago the operation of gastro-jejunostomy was accompanied by a mortality of nearly 40 per cent. But failures have been the preparation for victories. With improvements in surgical technique the causes of mortality under the control of the surgeon are being steadily eliminated, and to-day gastric operations are performed with a safety undreamt of even ten years ago.

As to the ultimate results, no less important than the immediate, our accumulated knowledge is yet small, and I shall devote the greater part of the three lectures which I have the honour of delivering before you to a consideration of some of the results of gastric surgery at the present time. To-day I propose to discuss some points in the operation of gastro-jejunostomy and its results, an operation which may be justly regarded as the keystone of gastric surgery.

THE IMMEDIATE RESULTS OF THE OPERATION OF GASTRO-JEJUNOSTOMY.

As the result of improved surgical technique the mortality from the operation of gastro-jejunostomy has steadily diminished during the past few years. At first the death-rate was enormous. I have collected 2548 cases with 1788 recoveries, a mortality of just under 30 per cent. But it is to the statistics of individual operators that we must turn to ascertain the true mortality of this operation. Mr. A. W. Mayo Robson[1] has reported a series of posterior gastro-jejunostomies, including simple and malignant cases, with a mortality of 3·7 per cent. Mr. B. G. A. Moynihan[2] has recently recorded a series of 171 gastro-jejunostomies for chronic gastric ulcer, uncomplicated either by acute perforation or severe hæmorrhage, with a mortality of a little over 1 per cent., while he has informed me that of his last 100 cases he has not lost a single patient. Dr. W. J. Mayo[3] has performed 307 gastro-jejunostomies for non-malignant disease with a mortality of 6 per cent., while in his last 81 operations there has been only one death. Admirable records have been published also by Kocher, Hurtmann, Murphy, Mikulicz, and others. Successful gastric surgery dates scarcely ten years back and is yet hardly out of its infancy, so that it is perhaps not sufficiently realised by the larger body of our profession that the statistics given in our text-books are no criterion of what can be accomplished to-day, for it may safely be claimed that gastro-jejunostomy for non-malignant disease is one of the safest operations of major surgery and one which at the present time is attended, in skilled hands, with an immediate mortality of not more than 3 per cent. On the various complications incidental to this and other abdominal operations I need not dwell, but there is one complication peculiar to gastro-jejunostomy to which some reference must be made—the occurrence of regurgitant vomiting.

REGURGITANT VOMITING.

The condition known as "circulus vitiosus" has long been the most dreaded complication of gastro-jejunostomy. Formerly the occurrence of persistent vomiting after this operation was attributed to the reflux of bile into the stomach from the afferent loop of the jejunum. It has now been definitely established by Dastre's[4] experiments on dogs that the presence of bile in the stomach has no injurious effect either on digestion or on the general health. This has been confirmed by an interesting case recorded by Mr. Moynihan,[5] in which gastro-jejunostomy was performed for complete rupture of the intestine at the duodeno-jejunal junction. The torn ends of the duodenum and jejunum were closed by suture, so that all the bile passed into the stomach through the pyloric orifice. Notwithstanding this the patient never suffered from vomiting and remained in perfect health until his death 14 weeks after the accident. Various explanations have been given as to the cause of regurgitant vomiting. Some believe that it is due mainly to the leaving of a loop of jejunum between the flexure and the anastomosis, and that this loop becoming "water-logged" is

[1] Immediate Results of Gastro-jejunostomy, Brit. Med. Jour., vol. ii., 1905, p. 762.
[2] Meeting of the British Medical Association, 1905, THE LANCET, July 29th, 1905, p. 326.
[3] Annals of Surgery, November, 1905, p. 644.
[4] Archiv für Physiologie, 1880, p. 316.
[5] Brit. Med. Jour., 1901, p. 1136.

unable to pass on its contents or by its weight causes a kink at the site of the anastomosis. Why a healthy piece of intestine should become water-logged, apart from mechanical obstruction, is not explained. I can only say that in all of my cases I have left a loop of jejunum varying from eight to 12 inches in length and in none has there been any evidence that this loop has become water-logged. From my own observation I believe that most, if not all, fatal cases of regurgitant vomiting are due to mechanical obstruction at the efferent opening. Whether the vomited material has regurgitated from the afferent loop into the stomach, from the stomach into the afferent loop, and thence back to that organ through the pylorus, is immaterial; the real factor is obstruction at the efferent opening and when waterlogging of the jejunal loop occurs it is secondary to some obstruction. This is well illustrated in a specimen (No. 2427 K, R.C.S.) obtained from a patient upon whom I operated for carcinoma of the pylorus. Three weeks after a preliminary gastro-jejunostomy I removed the pyloric half of the stomach. After the second operation the patient began to vomit and died on the fourth day. At the necropsy I injected the afferent loop with water and found that even under considerable pressure no fluid passed from the stomach into the efferent loop. On further examination it was apparent that a spur, formed by too sharp a curve of the efferent limb of the jejunum, acted as a valve and completely blocked the efferent opening. To the eye the opening seemed quite patent and was over two inches in length, and I think the fact that there was obstruction would have been overlooked had not the experiment of distending the stomach been tried before the removal of that viscus from the body. As the anastomotic opening was working perfectly up to the time of the second operation I think that the division of the gastro-hepatic omentum allowed the stomach to sag and so alter the curve of the efferent loop of the jejunum that a spur was formed. This accident might have been prevented by the application of some anchor sutures, a point in technique the importance of which I did not realise at that time. Another specimen (No. 2427 O, R.C.S.) also illustrates the production of regurgitant vomiting after posterior gastro-jejunostomy. In this case only serous sutures were employed and no mucous membrane was removed. The obstruction at the efferent opening was due mainly to mucous membrane, although there was slight spur formation as well. I think that there is little doubt that obstruction is less likely to ensue when portions of mucous membrane are excised and when a continuous muco-mucous suture is employed. In many of the records of cases which have died from regurgitant vomiting stress is laid on the size of the anastomotic opening but no mention is made of its patency on distending the stomach with water, and this is the true test of the efficiency of the opening. The remark of Terrier,[6] however unpalatable, is probably true—that the establishment of the circulus vitiosus is due to faulty operating. The treatment, therefore, is preventive, excision of a portion of mucous membrane, the use of a continuous muco-mucous suture, and most especially the careful arrangement of the anastomosed loop by means of anchor sutures. The bend of the loop must be so gradual that there is no suspicion of a spur at the mesenteric border of the jejunum. The points of insertion of the anchor sutures should be further apart on the stomach than they are on the jejunum. In this way the jejunum is drawn taut and the formation of a kink or fold of the mucous membrane is prevented. I lost one patient—my only fatal case after simple gastro-jejunostomy—before I realised the importance of this manœuvre. In the ideal anastomosis the channel through the jejunal loop should allow the bile to pass onward without being diverted into the stomach by any projection opposite the opening into the stomach (see specimen No. 2427 L, R.C.S.). Should regurgitant vomiting occur the simplest procedure is to perform an entero-anastomosis between the afferent and efferent loop, as suggested and performed by Braun[7] and also by Jaboulay in 1892. Several patients have been saved by a second operation, one by Ricard,[8] as late as the twenty-third day.

It is open to question whether the various modifications of gastro-jejunostomy designed to prevent reflux vomiting possess any advantage to justify their routine adoption, in preference to the simple anterior or posterior operation. The performance of an entero-anastomosis at the same time as the gastro-jejunostomy is, in my opinion, wrong in principle; at any rate in cases of gastric ulcer, as the mucous membrane of the anastomosed portion of jejunum is exposed to the hyperacid gastric juice, unprotected by the presence of bile. Neither does an entero-anastomosis always obviate the complication which it is designed to prevent. I know of one patient in whom this addition to the operation was performed who has suffered from regularly recurring attacks of regurgitant vomiting ever since his operation.

[6] Diseases of the Stomach, p. 164.
[7] Archiv für Klinische Chirurgie, 1893, vol. xlv., p. 361.
[8] Thèse de Paris, 1893-94, No. 186.

THE REMOTE RESULTS OF GASTRO-JEJUNOSTOMY.

The remote results of the operation of gastro-jejunostomy are of prime importance, for upon these results the status of the operation depends. Even at the present time there are some who look askance at this operation. They are so imbued with the idea that a short circuit between the stomach and jejunum has an injurious effect on digestion and metabolism that they regard the duodenum with a sort of reverence and consider any interference with its duties as almost a sacrilegious act. Hurtmann and Sonpault have stated that after gastro-jejunostomy patients never regain their former health and vigour. Is this apprehension justified? Is there any reason why an individual should not regain and maintain perfect health after a gastro-jejunostomy? The answer to this question depends, first, on the clinical evidence afforded by tracing the after-history of a large number of patients upon whom gastro-jejunostomy has been performed, and, secondly, on chemico-pathological evidence as to the effect of the operation on the metabolism of the human body.

I. *Clinical Evidence.*

The after-history of patients upon whom gastro-jejunostomy has been performed.—The remote history of patients upon whom the operation of gastro-jejunostomy has been performed is a chapter of surgery which has yet to be written. Mr. F. B. Jessett[9] has published the after-history of a patient upon whom he performed gastro-jejunostomy for supposed malignant disease, who died from apoplexy 11 years after operation. This, I believe, is by far the longest survival hitherto published. Both Mr. Mayo Robson and Mr. Moynihan have recorded histories of patients up to six years after operation but in most of the published records the histories have been of much shorter duration.

As a contribution to this subject I have collected 247 cases of operation from British surgical literature of the last 20 years and have endeavoured to ascertain the after-history of each case. The remote results are very difficult to obtain, so many of the recorded operations having been on hospital patients, that in spite of inquiries involving the writing of nearly 200 letters I have been able to gain information concerning only 116 of the 247 cases. Only cases which were operated on more than two years ago and in which the disease was not malignant are included, but it is interesting to note that in seven instances the original diagnosis of malignant disease has proved to be erroneous in the light of the subsequent history. I have included every case the after-history of which I have been able to obtain. Mr. Moynihan kindly allowed me to write for information directly to the medical men under whose care his patients had been, and in many other instances my information has been derived either from the medical attendants or from the patients themselves with whom the operators have put me in communication, a courtesy for which I take this opportunity of tendering to them my sincere thanks. Of the 116 patients six are dead. One patient died from apoplexy 11 years after operation and another from Bright's disease, both having remained perfectly well up to the time of death. One patient died from internal strangulation by adhesions five years after operation, illustrating the fact that subsequent trouble from adhesions is a factor to be considered after abdominal operations. Two patients died from perforation of a peptic jejunal ulcer, three and two years respectively after operation. In another case an operation was performed for this same complication from which the patient recovered, but died two years later from some abdominal ailment, whether connected or not with the previous operations it is impossible to say. In five patients the "cure" cannot be described as absolute. Two of these patients suffer from occasional attacks of dyspepsia. One has some pain and occasional vomiting. One is "fairly well," and one relapsed temporarily 17 months after operation but was apparently cured by lavage, and was quite well when last

[9] THE LANCET, April 6th, 1901, p. 1005.

heard of six months later. These five cases I have classified as "fair," although they are so well that they might be almost included in the list of "cures." In three instances the patients require to take some care as to their diet. Four of the patients have had return of their symptoms. One patient remained well for two months, then began to vomit every day, and at the present time vomits about every third day. One patient has had several relapses, although latterly the intervals between them have been getting longer. One patient relapsed after a few months and at the present time is worse than before operation. One patient had some return of gastric trouble 18 months after operation but her further history cannot be ascertained. It is interesting to note that all of these cases relapsed comparatively soon after operation and I can find no instance either in published records or by private inquiry of a patient having recurrence of symptoms after remaining well for 18 months subsequently to operation. All the remaining 97 patients have remained perfectly well ever since operation, the interval in two instances being respectively 18 and 19 years. The operation on both these patients was performed by Dr. Fritzsche[10] of Glarus, and in one of them the disease was supposed at the time to be malignant. These facts may be tabulated thus:—

Unsatisfactory cases—		
Died subsequently	4½	8
Relapsed	4½	
"Fairly" good result—		
Occasional dyspepsia	6½	9
Some care in diet necessary	3½	
"Cured" of gastric trouble—		
Died from other causes	2½	99
Alive and well	97½	
	116	

So that in eight only, or less than 7 per cent., of the 116 cases has the result of gastro-jejunostomy proved completely unsatisfactory.

There is always a possible fallacy in drawing statistical conclusions from isolated published cases and I do not wish to lay great stress on the proportion of "cures," but I would point out that most of the cases in my table were published soon after operation as examples of the immediate benefit rather than of the remote result, so that they can hardly be described as selected cases as regards the purpose for which I am using them.

Turning again to the cases in which the result of operation has not been perfect, you will notice that in two out of the four which have relapsed Murphy's button was employed to effect the anastomosis, while in a third the communication made between the stomach and jejunum was only three-quarters of an inch in length. In two of the three patients who require to take care as to their diet Murphy's button was used, while in the other patient the anastomotic opening was made only one and a half inches in length. Murphy's button was also employed in two of the six cases which I have classified as "fair." These facts lead me to say a few words as to the methods employed to effect the anastomosis. These comprise simple suture (Halsted's, Czerny's, or continuous), suture with the aid of a temporary splint (Mayo Robson's bobbin or Laplace's forceps), and mechanical appliances (e.g., Murphy's button). Halsted's suture, while it secures close apposition of the serous surfaces, has several disadvantages. First, it requires the use of so many separate sutures that it can hardly be completed in less than 20 minutes. Secondly, as it does not take up the mucous membrane hæmorrhage may occur from vessels therein which do not bleed until after the patient has recovered from the shock of operation. A patient of Rydygier[11] died from this cause and other similar cases have been reported. Thirdly, as the gastric and jejunal mucous membranes are not brought into apposition, gastric and intestinal contents may burrow between the walls of the viscera and lead to suppuration. Apparently this occurred in one of my earlier cases in which I employed this method as the patient brought up about a pint of offensive pus two weeks after operation, but fortunately with no ill-result. Fourthly, when the mucous membranes are not sutured there is greater tendency to subsequent contraction and diminution of the size of the opening. Laplace's forceps are open to the same objections. A bone bobbin, while of great assistance in performing end-to-end anastomosis, appears to me to complicate rather than to simplify gastro-jejunostomy, and it has also, in common with Murphy's button, the disadvantage that the size of the anastomotic opening is determined by the size of the bobbin rather than by the size of the stomach. The more dilated the stomach the greater will be its subsequent diminution and the corresponding diminution of the anastomotic opening. Hence a large stomach necessitates an extra large opening, but an extra large bobbin cannot be employed owing to the small lumen of the jejunum. Murphy's button is at once the simplest and the most dangerous of the different methods, and is an appliance, in my judgment, altogether out of place inside the abdomen, while the time saved by its use is so slight as to be negligible. Apart from the immediate dangers attending its use, the opening often undergoes considerable contraction, the result probably of cicatrisation of the granulating wound left by the sloughing of the rim of tissue compressed by the button. I have seen three cases, three, four and a half, and five months respectively after gastro-jejunostomy, effected by Murphy's button, and in all of them the opening was completely closed. Many like cases have been recorded by others. I have been able to find only one museum specimen showing the condition some years after a gastro-jejunostomy effected by this method. The specimen is in St. Mary's Hospital museum (No. 291). Through the kindness of the curator, Dr. B. H. Spilsbury, the specimen has been reopened, so that I have been able to examine it carefully. The anastomotic opening is oval in shape, measuring nearly an inch in its longer diameter, and is surrounded by a diaphragm about a quarter of an inch in width. As the patient died from intestinal obstruction the jejunum is enormously distended and I think it probable that the opening is also distended and consequently larger than was the case during life. Probably such an opening would be satisfactory so long as the patient kept free from gastritis, in which case it might not be large enough to allow complete evacuation of the stomach. In a collection of all the instances which I can gather of contraction or closure of a gastro-jejunostomy opening it is noteworthy that in all of them either serous sutures alone were employed, or the anastomosis was effected by Senn's plates or Murphy's button. At the same time it is only fair to admit that in many cases the use of Murphy's button has been attended with great success and in a series of 116 cases are many such instances. Chlumskij[12] states that the opening is ideal in its working and Kammerer[13] records 11 cases with a satisfactory opening in all of them, but others have had less satisfactory experiences. The conclusion to be drawn from this conflicting evidence is that the button is an uncertain method, the extent of subsequent contraction probably depending on the amount of pressure exerted by the rims of the button. Since, then, both from the evidence of post-mortem examinations and from the knowledge gained at subsequent operations on patients who have had recurrence of symptoms, we know that there is

Table of cases showing the Condition of the Stomach some Years after the Operation of Gastro-Jejunostomy.

No.	Method of suture.	Years since operation.	Condition of the stomach.
1	Interrupted Lembert.	2½	Marked dilatation.
2	Two continuous sutures; mucous membrane sutured (opening 2½ inches.)	3	No evident dilatation.
3	Ditto.	3½	" "
4	Ditto.	2	No evidence of dilatation.
5	Murphy's button.	9	Considerable dilatation.
6	" "	5	Slight dilatation.
7	Two continuous sutures; mucous membrane sutured (opening 2½ inches).	2	No evident dilatation.
8	Halsted's sutures (opening nearly 3 inches).	2	No evidence of dilatation.

[10] Brit. Med. Jour., 1888, p. 787.
[11] Centralblatt für Chirurgie, 1883, p. 241.
[12] Annals of Surgery, 1898, p. 225.
[13] Ibid., 1900, p. 30.

often much contraction after the use of Murphy's button and after the employment of methods which do not include suturing the mucous membrane, I think we may fairly conclude that the reason why so large a proportion of the patients on whom these methods have been employed either relapse or require to take extra care in their diet is because the opening is of insufficient size. Further clinical evidence can be adduced in favour of this hypothesis. I have had opportunity of examining eight patients some years after they have had gastro-jejunostomy performed. In these patients the condition of the stomach as determined by inspection, percussion, and in some instances by inflation, is shown in the accompanying table.

On the first patient a second operation was performed six months after the above observation was made and the opening was found to be almost closed. The result in the eighth case shows that anastomosis without suture of the mucous membrane may prove efficient if a very large opening be made originally. Personally, I attach great importance to the size of the opening. Mr. Moynihan has also called attention to this point and Mr. A. E. S. Barker informs me that he always makes the opening at least two and a half inches long. If this practice is the correct one we ought to find that those cases in which a small opening has been made are on the whole less satisfactory than those in which a large opening has been made. I believe that this is so, although it is a difficult point to investigate, as it is not always possible to ascertain the size of the opening made in any particular case. In my collection of 116 cases are four in which the size of the opening is definitely stated. In one of these the opening made was one and a half inches and the patient has to exercise some care as to her diet. In another an opening was made three-quarters of an inch in length and the symptoms soon recurred, so that now the patient vomits more than before operation. In another the opening was three-quarters of an inch and this patient gradually relapsed and at the present time can take only milk food. One patient in whom the opening was one inch long has remained perfectly well. In this case operation was performed for the relief of symptoms of pyloric obstruction after swallowing a corrosive poison, and in such a case it is quite likely that a temporary opening is all that is necessary. The symptoms may have been due to pyloric spasm the result of hyperchlorhydria from the ulceration. The gastro-jejunostomy would at once diminish the hyperchlorhydria and so favour the healing of the ulcer, the pyloric spasm would disappear, and the normal channel through the pylorus would be restored. Then, as the cause of the ulcer had been accidental, there would be no tendency to recurrence and the size of the opening would be immaterial as it had served its purpose. I have recently met with two additional cases in which the anastomotic opening was made an inch or less in length. One of these patients has relapsed and in the other the relief afforded is far from complete. As I have already remarked, Mr. Barker makes a large opening. All the four patients operated on by him which are included in my table have remained perfectly well. The same remark applies to the four patients of Mr. W. G. Spencer, who also adopts a large opening. Mr. Moynihan likewise advocates a similar practice, and of the 32 patients of his in my series in 30 the after-result is excellent. The four patients of my own, in all of whom a large opening was made, have remained entirely free from gastric symptoms.

The best means of effecting the anastomosis appears to be by the use of two continuous sutures, an inner hæmostatic and penetrating all the coats of the two viscera, and an outer peritoneal suture. By bringing the edges of the mucous membranes together intestinal contents are prevented from burrowing between the coats of the anastomosed viscera and further subsequent contraction from cicatrisation is reduced to a minimum. As I have already mentioned perforation of a jejunal ulcer occurred in three of the 116 cases in my table, a subject to which I will briefly allude.

Peptic ulcer of the jejunum.—In 1899 Braun[14] directed attention to the occurrence of peptic ulcer of the jejunum after the operation of gastro-jejunostomy. Two years ago Mr. Mayo Robson[15] reported the first case in this country and gave a list of all cases previously reported, 14 in all. To these must be added a case of Quénu,[16] a case of Hadra,[17] and two cases which I have discovered on following up the after-history of the collected cases of gastro-jejunostomy. There are thus 19 cases in all.

Why peptic ulcer of the jejunum should follow gastro-jejunostomy is not clear. It is generally admitted that hyperchlorhydria is an almost constant concomitant of gastric ulcer—whether it is cause or effect need not concern us here. This at least is certain that hyperchlorhydria is the condition which prevents the healing of a gastric ulcer. Now it has been shown by many observers, and I have repeated the observation, that the acidity of the gastric contents diminishes after gastro-jejunostomy, while in many cases all trace of free hydrochloric acid disappears. Therefore a peptic ulcer is one of the last complications we should expect after the operation of gastro-jejunostomy. The predisposing or the exciting cause of peptic jejunal ulcer is probably persistence, or subsequent development, of hyperacidity after operation, and consequent digestion of the jejunal mucous membrane by the hyperacid juice. What, then, are the causes of hyperacidity after gastro-jejunostomy? I suggest that in most instances hyperchlorhydria is due to insufficient size or inefficient working of the anastomotic opening. Hayem[18] states that the presence of an acid liquid in a fasting stomach is an indication that the opening does not allow of complete evacuation of the stomach. In one case only have I found hyperacidity after the operation of gastro-jejunostomy, and in that case subsequent operation proved that the opening between the stomach and jejunum was almost closed. I quite admit that a slight degree of gastric stasis due to a small anastomotic opening may have no ill result, but it is reasonable to argue that in such a case a slight attack of gastritis, due to some error in diet, insufficient to cause trouble if the anastomotic opening were larger, may lead to such a degree of gastric stasis that hyperchlorhydria ensues and this produces, or at least predisposes to, peptic jejunal ulcer. Doubtless in some cases oral sepsis or long-continued indiscretions or excesses in diet may lead to septic gastritis and stasis, however large the anastomotic opening may be, and in this connexion it is interesting to note that one of the fatal cases was that of a patient known to be a heavy drinker and the ulcer actually perforated while he was drunk.

An important fact is that in 14 out of the 19 cases the anterior operation had been performed. If it could be shown that peptic jejunal ulcer is more likely to occur after the anterior operation such proof would be an argument in favour of the posterior operation. At present the available statistics scarcely support such an argument. In some of the cases a Murphy's button was used to effect the anastomosis, a method which, as I have already pointed out, may result in an inefficient opening. Further, until comparatively recently the anterior operation was much more frequently adopted than is the case at the present time, and this circumstance alone probably accounts for the fact that the greater number of recorded cases of peptic jejunal ulcer have followed the anterior operation. Whether this explanation be correct or not, it appears that this complication is a more serious one when it follows the posterior operation. In both the instances in which peptic jejunal ulcer followed the posterior operation the patient died, whereas of the 14 which followed the anterior operation eight of the patients died and six recovered. The risk from this complication is difficult to estimate, but it is probably less than is suggested by the number of times it occurs in my collected series of 116 gastro jejunostomies. In that series only 30 of Mr. Mayo Robson's gastro-jejunostomies are included, and in these peptic jejunal ulcer occurs once, but Mr. Mayo Robson has during the period covered by those cases performed 179 additional gastrc-jejunostomies, and in none of them has peptic jejunal ulcer occurred. In estimating the frequency of peptic jejunal ulcer these additional cases should be added to those in my series. If that be done the proportion of gastro-jejunostomies followed by perforating peptic jejunal ulcer is 3 in 295, or just over 1 per cent. The complication is clearly an uncommon one, as Professor Wölfler informs me that he has only met with it once, while

[14] Die Verhandlungen der Deutschen Gesellschaft für Chirurgie, 1899, S. 94.

[15] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxvii., p. 339, 1904.

[16] Bulletin de la Société de Chirurgie de Paris, 1902, No. 7.

[17] Die Verhandlungen der Deutschen Gesellschaft für Chirurgie, 1900, S. 152.

[18] Quoted by Terrier and Hartmann, p. 195.

it occurred twice only in a series of 160 gastro-jejunostomies by Mikulicz. It is not too much to hope that peptic jejunal ulcer may be prevented when the necessity for a large anastomotic opening is more fully realised. The importance, however, of reasonable care in diet and of the prevention of oral sepsis must not be overlooked.

The following general conclusions as to the after-results of the operation of gastro-jejunostomy may be drawn:—1. That the use of mechanical appliances is attended with uncertain results. 2. That a small opening is apt to prove unsatisfactory. 3. That if the mucous membranes of the stomach and jejunum are not brought into apposition undue contraction or even complete closure of the opening may ensue. 4. That about 85 per cent. of the patients suffering from simple pyloric stenosis or gastric ulcer are completely relieved, while in about 7 per cent. of the cases relief is almost complete. Eliminating the cases in which a mechanical appliance has been used or in which a small opening has been made, the proportion of cases completely relieved is about 92 per cent. 5. That the risk of subsequent perforation of a peptic jejunal ulcer is under 2 per cent. 6. That as patients have regained and maintained their normal weight and have lived for nearly 20 years in perfect health, there can be no reason to suppose that the operation of gastro-jejunostomy tends to shorten life.

Let us now turn to the chemico-pathological evidence as to the effect of gastro-jejunostomy on the body and see whether this supports the clinical evidence which I have adduced.

II. *Chemico-Pathological Evidence.*

The effect of the operation of gastro-jejunostomy on the metabolism of the human body.—In 1897 Jöslin[19] published a paper recording observations on the metabolism of two patients upon whom the operation of gastro-jejunostomy had been performed. As the result of his observations he came to the conclusion that after gastro-jejunostomy there is a considerable diminution of the proportion of nitrogen absorbed from the food which is introduced into the alimentary canal and also a more marked diminution of absorption in respect to fats and hydrocarbons. Heinscheimer[20] also found a diminution of absorptive power, but to a far slighter extent, and he attributed it to the cutting off of the duodenal loop. Since that time this subject has been strangely neglected. No one, so far as I can ascertain, has attempted to prove or to disprove the correctness of Jöslin's conclusions. The labour involved in such an investigation has apparently proved an effectual deterrent. And yet the question is one of more than academic interest, for Jöslin's experiments have been used as an argument against the performance of gastro-jejunostomy, except as a last resort, and have had a considerable effect in retarding a more general use of this operation in gastric ulcer and other non-malignant affections of the stomach. The evils anticipated from loss of the supposed beneficent functions of the duodenal loop have acted as a veritable bogey, which has caused the postponement of surgical intervention in many cases until the patient has been almost in the last stage of cachexia and exhaustion. If, however, it can be shown that the operation of gastro-jejunostomy has not the evil effects attributed to it, doubtless there will be less hesitation in recommending the operation at an earlier stage than heretofore.

When it is fully realised that gastro-jejunostomy is the only curative of relapsing gastric ulcer then we shall less often meet with those serious sequels, pyloric stenosis, hour-glass stomach, and perforation, and the operation being not only curative of gastric ulcer but a preventive of its complications will fulfil the highest ideal of medical art. The question, too, bears upon the method of performing gastrectomy, for Mr. Mayo Robson and Mr. Moynihan[21] have quoted Jöslin's experiments as an argument in favour of end-to-end anastomosis in preference to union of the jejunum to the stomach after the removal of the growth. To this point I shall refer again when treating of gastric carcinoma.

The after-history of the 116 cases shows that patients have lived for many years in perfect health and have regained and maintained their normal weight and suggests that it is unlikely that the operation of gastro-jejunostomy has the serious effect on metabolism which has been attributed to it. To test this deduction I have made a series of investigations on the metabolism of patients upon whom I had previously performed the operation of anterior gastro-jejunostomy. The observations were made at different intervals after operation, the shortest interval being two months and the longest exactly two years. In all of the patients the operation had been performed for non-malignant disease. It is unnecessary here to describe in detail the methods adopted further than to state that each patient was placed on a fixed diet containing a known amount of nitrogen, fats, and sugar, and after three days of the fixed diet all urine and fæces passed were collected, and the amounts of nitrogen, fats, and sugar contained in them estimated. The duration of each observation was four days. In this connexion I must express my indebtedness to my friend, Dr. Francis W. Goodbody, for his valuable advice and assistance as to the conduct of this investigation.

First observation.—The first observation was made on a man upon whom five months previously the operation of anterior gastro-jejunostomy had been performed by myself for gastric ulcer. Analysis of the urine and fæces showed that during the four days of observation 4·2 grammes of unabsorbed nitrogen were passed in the fæces, and as during this period the patient consumed 46·05 grammes of nitrogen it follows that the amount of nitrogen unabsorbed represents just over 9 per cent. of the total nitrogen taken in the food. As regards fats the amount unabsorbed and passed in the fæces was 25·68 grammes, while the amount taken in the food was 332·84 grammes, so that the amount of fat unabsorbed represents 7·7 per cent. of the fat intake. Now from the accompanying table taken from Rübner[22] it appears

Table showing the Metabolism of a Healthy Man (Rübner).

Food contained—		Fæces contained—		Absorbed—	
Nitrogen.	Fat.	Nitrogen.	Fat.	Nitrogen.	Fat.
19·4 grammes.	119·9 grammes.	1·5 grammes = 7·7% of intake.	6·7 grammes = 5·6% of intake.	92·3% of intake.	94·4% of intake.

that in a healthy man the fæces contain 7·7 per cent. of the total nitrogen taken, consequently 92·3 per cent. of the total nitrogen given is absorbed. In the case under investigation 91 per cent. of the nitrogen given was absorbed, so that the short circuit between the jejunum and the stomach only diminished the absorption of nitrogen by less than 1·5 per cent. of the total nitrogen given. As regards the fat, Rübner's table shows that in a healthy man 5·6 per cent. of the fat taken is passed in the fæces, while 94·4 per cent. is absorbed. In my patient 92·3 per cent. of the fat given was absorbed. Gastro-jejunostomy therefore only diminished the absorption of fat by 2·1 per cent. of the total fat taken.

Second observation.—The second observation was carried out on a man seven months after suture of a perforated gastric ulcer, anterior gastro-jejunostomy having been performed at the same time. Analysis showed that during the four days of observation 6·72 grammes of unabsorbed nitrogen were passed in the fæces, and as during this period the patient consumed 70·04 grammes of nitrogen the amount of unabsorbed nitrogen represents only 9·5 per cent. of the total nitrogen taken in the food, 90·5 per cent. being absorbed and retained in the body. As regards the fat, the amount passed in the fæces was 28·80 grammes, while the amount of fat taken in the food was 364·48 grammes. Thus the amount of fat unabsorbed amounts to only 7·5 per cent. of the fat taken in the food. Comparing these results again with Rübner's table we see that in this case the operation of gastro-jejunostomy caused a diminution of only 1·8 per cent. in the nitrogen absorption and only 1·9 per cent. in the fat absorption.

Third observation.—The third observation is, perhaps, the most interesting in the series. The patient was a man, aged 51 years, upon whom I had performed anterior gastro-jejunostomy two years previously after one slight and one very severe attack of gastric tetany. At the operation I found almost complete stenosis of the pylorus, evidently cicatricial in character. The patient made a perfect recovery and has remained in excellent health ever since; he can eat and digest anything, and has gained nearly three stones in weight. Exactly two years after the operation he put himself under my care again for the purpose of this investigation. He was placed upon a very liberal diet of chops, eggs, fish, milk,

[19] Berliner Klinische Wochenschrift, 1897, p. 1047.

[20] Mittheilungen aus den Grenzgebieten der Medicin und Chirurgie, 1896, 1, 348.

[21] Diseases of the Stomach, 1901, p. 81.

[22] Zeitschrift für Biologie, Munich, 1879, Band xv., S. 115.

potatoes, biscuits, milk-pudding, and butter, and his metabolism was investigated. The various analyses showed that the amount of unabsorbed nitrogen passed in the fæces represented 7·9 per cent. of the total nitrogen taken in the food, whilst as regards the fats the amount of unabsorbed fat passed in the fæces corresponded to 7·3 per cent. of the fat given in the food. In other words, gastro-jejunostomy diminished the nitrogen absorption by only 0·2 per cent. and the fat absorption by 1·7 per cent., taking the figures already quoted from Rübner as representing the standard of a healthy man.

Fourth observation.—The fourth observation was made in the case of a woman, aged 40 years, who had had two severe attacks of hæmatemesis. After convalescence from the second attack, which nearly cost her her life, I performed anterior gastro-jejunostomy. Two months after the operation her metabolism was investigated while she was on a purely milk diet. The analyses showed that the amount of unabsorbed nitrogen passed in the fæces during the five days the observation lasted amounted to 4·1 grammes, representing 7·3 per cent. of the amount of nitrogen taken in the food. As regards fat, 20·20 grammes were passed in the fæces, representing 5·3 per cent. of the fat taken in the food.

It is noticeable that the amount of unabsorbed nitrogen is rather less than in a normal individual. The explanation of this probably is that the patient's absorptive power was at its maximum owing to her having been on a very restricted diet for a long period. If this be so the experiment is important as indicating that gastro-jejunostomy did not interfere with the assimilation of food in which she was of so much need after many months of semi-starvation. I could quote another experiment almost identical in its results with this one in which operation was performed for hæmatemesis, but I think those already given are sufficient for my present purpose. Before summing up my conclusions I will briefly criticise Jöslin's experiments.

Criticism of Jöslin's observations.—In Jöslin's two experiments the amount of unabsorbed nitrogen reached respectively 12·66 per cent. and 19·9 per cent. of the nitrogen taken in the food, while the fat lost in the fæces in one case reached 18 per cent. and in the other case 31·2 per cent. of the fat taken in the food. I do not, of course, for one moment question the accuracy of Jöslin's analyses. His paper bears internal evidence of careful and trustworthy work. I do, however, maintain that observations on patients suffering from cancer cannot be accepted as evidence concerning the effect of the operation of gastro-jejunostomy on the metabolism of patients not affected with malignant disease. Jöslin's observations were limited to two patients, upon both of whom operation had been performed on account of carcinoma. His first observation was made on a woman, aged 45 years, from whom two-thirds of the stomach had been resected for carcinoma, the ends of the duodenum and stomach being closed and a gastro-jejunostomy performed. Four months after the operation her metabolism was investigated. Analysis showed that 12·66 per cent. of the nitrogen in the food was unabsorbed and passed in the fæces, while 18·7 per cent. of the fat given was lost in like manner. I think that it is a fair criticism of this experiment to say that the condition found may have existed before operation, a possibility which should have been tested by a control experiment made before the gastro-jejunostomy was performed. The patient had had a cancerous growth removed, and it is quite possible that at the time of the experiment she had a recurrent growth. Diminished power of absorption is a marked feature of gastric carcinoma. Further, the tendency of cancer of the stomach to invade the pancreas and surrounding lymphatic glands is well known, and as Vaughan Harley[23] has shown, great loss of absorptive power occurs in obstruction of the pancreatic duct. It is quite possible that in this case there was some interference with the pancreatic secretion as a result of infiltration of the pancreas or surrounding glands. In any case, I maintain that in the absence of a control observation before the gastro-jejunostomy this experiment cannot be accepted as evidence that the diminished absorption was due to operation rather than the result of disease.

The subject of Jöslin's second observation was a man, aged 41 years, upon whom the operation of gastro-jejunostomy had been performed for carcinoma of the pylorus. In this observation the amount of nitrogen lost in the fæces was even higher than in the first observation. The nitrogen unabsorbed represented 19·95 per cent. of the nitrogen intake and the fat lost in the fæces amounted to 31·21 per cent. of the total fat contained in the food. In this instance a control experiment was made before operation, but as the patient was vomiting frequently owing to pyloric obstruction the value of the control is, I think, open to question. In order to calculate the precise proportion of food-stuffs retained by the patient it was necessary to collect all the vomit and to estimate the amount of fat and nitrogen contained therein, and then to deduct the respective amounts from the amounts of fat and nitrogen given in the patient's food. The sources of error involved in such a process are considerable and that an error crept in somewhere is evidenced by the fact that the amount of nitrogen calculated as lost in the fæces was only 3·6 per cent. of the nitrogen supposed to have been retained. This would mean that the patient, although suffering from gastric carcinoma, was actually absorbing 4 per cent. more of the nitrogen given in the food than is absorbed by a healthy man. This is so improbable that we may fairly assume that the amount of food which the patient retained was over-estimated and therefore the control experiment cannot be regarded as conclusive. It is possible that the loss of absorptive power observed after the gastro-jejunostomy existed before operation and was due to the cancer from which the patient suffered.

Conclusions.—My results thus differ completely from those of Jöslin. In none of my observations did the unabsorbed nitrogen amount to more than 2 per cent. above the amount usually passed in the fæces by a healthy individual, while the amount of fat passed unabsorbed did not on any occasion exceed 7·7 per cent. of the fat taken in the food, that is just over 2 per cent. above the amount usually passed in the fæces by a healthy man. The objection may be raised that in observations 1, 2, and 4 there was no evidence of pyloric obstruction and that therefore the pylorus may have been acting as well as the anastomotic opening. I admit the possibility that in these patients some of the food may have passed through the pylorus, but I maintain that this admission does not invalidate the conclusion to be drawn from the experiments. Granting that in these three cases the pylorus was patent, it is still clear that the additional opening between the stomach and jejunum does not interfere with metabolism to any extent. The physiological objection, therefore, to the performance of gastro-jejunostomy in cases of chronic gastric ulcer without stenosis falls to the ground. In the patient upon whom the third observation was made the pylorus at the time of operation was almost completely stenosed. In this case my investigation showed that although all food passed from the stomach directly into the jejunum the metabolism was practically unaffected. Those, then, who object on physiological grounds to the operation of gastro-jejunostomy in cases of gastric ulcer, except when there is pyloric stenosis, are on the horns of a dilemma. If they maintain that after gastro-jejunostomy all food passes through the anastomotic opening, then my experiments show that this is attended with no injurious results. If, on the other hand, they argue that when the pylorus is patent at the time of operation it will remain so and permit of the passage of food through the duodenum, then the observations here recorded show that the presence of a short circuit as well as the normal outlet has no injurious effect on metabolism and clinical evidence proves that the short circuiting has a very beneficial effect on a gastric ulcer.

We may, I think, fairly conclude that after a gastro-jejunostomy most of the food passes through the larger and less resistant artificial opening and that when all the food does pass through the short circuit, as in my third observation, this cutting off of the duodenal loop is attended by no ill effects.

These experimental observations are confirmed by the after-histories of the patients upon whom the operation of gastro-jejunostomy has been performed. I would particularly direct your attention to the hitherto unpublished after-history of Abel's case. This child, upon whom gastro-jejunostomy was performed for infantile hypertrophic stenosis of the pylorus at the early age of eight weeks, is at the present time in perfect health. Is it conceivable that a child would live for seven years and develop into a strong healthy child if the operation seriously interfered with metabolism? There can be only one answer to this question. Then, again, there are records of patients

[23] Laboratory Hospital Reports, University College, July, 1897, p. 253.

who have enjoyed perfect health for 10, 12, 14, 18, and 19 years and in many instances have regained and maintained their normal weight. Does this suggest that the operation of gastro-jejunostomy has seriously interfered with their absorption, either of nitrogen or of fat? Therefore both clinical and chemico-pathological evidence demonstrate that the operation of gastro-jejunostomy does not appreciably interfere with the metabolism of the human body and is compatible with the enjoyment of perfect health.

LECTURE II.

Delivered on Feb. 21st.

GASTRO-JEJUNOSTOMY *(continued)*.—THE CHOICE OF OPERATION.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—A considerable number of modifications of the method of performing gastro-jejunostomy have been proposed, but for practical purposes these may be reduced to two—the anterior and the posterior operation. Of recent years the wave of fashion has been increasingly in favour of the posterior operation, which in this country has been warmly advocated by Mr. Mayo Robson and Mr. Moynihan. While fully realising the importance of the opinions of those who have had such extensive experience in these cases I will attempt, even at the risk of being considered out of date, to justify a preference for the anterior operation by a comparison of the relative advantages and disadvantages of the two methods.

1. One of the advantages claimed for the posterior operation is that the opening is at the most dependent part of the stomach and that consequently the gastric contents drain away more readily into the intestine. I am not sure that this assumption is warranted. The anastomotic opening is usually placed as close to the greater curvature as possible. Now, whether the greater curvature of the stomach remains the most dependent part of the stomach during contraction of that organ is open to question. Probably the longitudinal contraction of muscular fibres raises the greater curvature so that it is at a higher level than the pylorus and, as it were, tilts the gastric contents onwards towards the pylorus. If this view be correct we should follow nature's original scheme as closely as possible by making the anastomotic opening well towards the pyloric end of the stomach. In the next place, it is very questionable whether, as is generally supposed, a gastro-jejunostomy opening acts as an open drain-pipe allowing the immediate escape of fluids introduced into the stomach. Carle and Fantino have shown that if, after gastro-jejunostomy, the stomach be distended with carbonic acid gas the escape of gas is not immediate but gradual. They believe that a sphincter is developed at the new opening. I think that this fact, which I have myself observed on several occasions, may be explained in a simpler manner. We know that two sets of movements take place in the stomach—churning movements and propulsive movements, and that it is not until after a period of churning movements that the propulsive movements commence to pass the gastric contents onwards. To be effectual these propulsive movements must be taken up by the pylorus and continued on through the duodenum to the small intestine. How otherwise are we to explain the fact that almost complete gastric stasis may exist with a pylorus which admits the tip of the finger? Is not the explanation that the pylorus, although patent, is so thickened by inflammatory tissue, or new growth, or bound down by adhesions, that it is no longer able to carry the propulsive waves onwards? After a gastro-jejunostomy has been performed, may we not suppose that so long as the gastric movements are of a churning character the jejunum remains in a state of repose, but as soon as propulsive movements commence, these movements are taken up and continued by the jejunum, thus allowing the gastric contents to pass on their way. These propulsive movements of the stomach are effected by the circular muscle of the stomach and are greatest at the pyloric end, another indication that this is the best situation for the anastomosis. Further, in making the anastomosis some of the circular fibres are cut across; the contraction of these fibres, attached as they are to the margins of the anastomotic opening, will tend to open it up when once the propulsive movements have begun. These considerations, hypothetical I admit, suggest that the pyloric end of the stomach, and not that part which appears to be the most dependent portion, is the more suitable situation for the anastomotic opening. There is a possible objection to making the opening in this situation on the posterior wall, in that the adhesion of the torn mesocolon may to some extent impair the motility of the pyloric segment of the stomach. It is probable, therefore, that so far as securing efficient evacuation is concerned, if there be any difference between the anterior and posterior method, the difference is in favour of the anterior operation. Assuming now for a moment that a gastro-jejunostomy is simply a drainage opening, and that the greater curvature is the most dependent part of the stomach, does the posterior operation afford more efficient drainage than the anterior? If the patient is lying down the answer must be in the affirmative, but if the patient is sitting up this supposed advantage of the posterior operation is not so clear. On two occasions I have had an opportunity of examining post mortem the viscera of patients who had died some months after a posterior gastro-jejunostomy and in both instances the anastomotic opening into the jejunum was situated from two to two and a half inches above the lower border. Some years ago I opened the abdomen of a patient upon whom posterior gastro-jejunostomy had been performed five months previously. The anastomotic opening had completely closed and the jejunum was fixed to the posterior gastric wall nearly two and a half inches above the greater curvature and was surrounded by a firm mass of fibrous tissue. On the other hand, on four occasions I have examined the viscera of patients who have died from four to ten months after a successful anterior gastro-jejunostomy and in every case the anterior wall of the stomach had been drawn down so that the anastomotic opening was situated in the floor of the stomach. When we consider that in the posterior operation the site of the anastomosis is encircled by torn mesocolon, which, as in the case mentioned above, may become adherent both to the stomach and to the jejunum, it is easy to understand that the anastomotic opening is not drawn down to the lowest part of the stomach so readily as in the case of the anterior operation. If drainage be the function of a gastro-jejunostomy it is therefore doubtful whether, after the patient has assumed the erect position, the posterior affords as efficient drainage as the anterior operation. The objection to the situation of the anastomotic opening in the anterior operation while the patient is in the recumbent position is easily overcome by sitting the patient up as soon as the effects of the anæsthetic have passed off.

2. It is claimed that regurgitant vomiting is less frequent after the posterior operation. This is an assertion by no means proved; indeed, it is worthy of note that some of the worst cases of regurgitant vomiting on record have followed the posterior operation (Terrier, Hartmann).[24] So far as the anterior operation is concerned, regurgitant vomiting may, I believe, be prevented by careful arrangement of the anastomosed jejunal loop. In the anterior operation the weight of the attached jejunum probably tends to keep the opening patent, whereas in the posterior operation the jejunum is supported rather by the fixed mesocolon which possibly tends to flatten the jejunum against the stomach.

3. The posterior operation necessitates the making of an adventitious hole in the mesocolon. The avidity with which portions of small intestine seek out, and find their way into, such apertures is well known. There are several cases on record in which portions of intestine have slipped through the artificial aperture in the mesocolon and have become strangulated. In Mr. Moynihan's[25] first series of 100 cases one of the two deaths was due to this accident. In a second case he opened the abdomen, reduced the hernia, and the patient recovered. Mr. A. E. Barker and Mr. W. Alexander have kindly informed me of similar cases which have been under their care and others have been recorded. Doubtless there are other cases which have not been published. Some surgeons now stitch the edges of the mesocolon to the jejunum. Whether this will prevent the occurrence of internal hernia remains to be seen, possibly it will, but it is also possible that the adhesions may constrict the anastomotic opening. Mr. Barker[26] has recorded a case in which two years after a posterior gastro-jejunostomy nearly the whole of the small intestine passed over the afferent loop and was constricted thereby. It appears, therefore, that internal hernia

[24] Chirurgie de l'Estomac, p. 201.
[25] Brit. Med. Jour., vol. ii., 1903, p. 1562, and Transactions of the Clinical Society, 1903.
[26] THE LANCET, Nov. 5th, 1904, p. 1277.

is a complication to be reckoned with after posterior gastro-jejunostomy. I have been able to find only one case of internal hernia following the anterior operation. The patient died one year after operation and at the post-mortem examination the jejunum was found to be twisted at the seat of anastomosis and rather more than half of the small intestine had passed through the loop of the jejunum between the origin of the jejunum and the stomach. Mr. W. J. Mayo[27] thought that possibly a slight twist had occurred at the time that the anastomosis was made. It is noted that 14 days after the operation temporary intestinal obstruction was caused by the Murphy's button which had been used to effect the anastomosis. Possibly this attack of obstruction may have played some part in the causation of the subsequent internal hernia. In three out of the four cases which I have examined post mortem some months after the anterior operation the situation of the afferent loop was such that it was mechanically impossible to slip any part of the small intestine over it.

4. It has been urged against the anterior operation that there is risk of compression of the colon by the jejunum or *vice versâ*. I have found three recorded cases bearing on this accident. A patient under the care of Lauenstein[28] died from exhaustion four months after operation. It is stated that the transverse colon was *slightly* compressed. The anastomosis, however, had been made six feet below the duodenum, so that it is scarcely fair to quote this case as evidence that the colon may be compressed after anastomosis in the proper situation. At a post-mortem examination on a patient of Lücke,[29] who died 18 days after operation, the transverse colon was somewhat constricted by the crossing gut. It is stated, however, that the suture holes were slightly torn by traction, so evidently there was undue tension on the jejunum owing to the anastomosis being made too near the duodeno-jejunal junction. A case reported by Courvoisier[30] is sometimes quoted as an instance of gangrene of the colon from pressure. The anterior operation was performed and the patient died 12 days later. At the post-mortem examination an abscess was found in the great omentum. Inasmuch, however, as it is distinctly stated that at the operation the transverse colon was already involved in the growth, it is possible that in separating adhesions the colon was so injured as to allow of the escape of micro-organisms. Thus these cases do not afford any evidence that the afferent loop compresses the colon, provided the loop is of sufficient length to pass over the colon without any tension. In all the cases which I have examined post mortem some months after an anterior gastro-jejunostomy has been performed I have found that the afferent jejunal loop emerged from under the colon at, or close to, the splenic flexure. Nature thus appears to protect the afferent loop from the influence of the excursions of the more moveable transverse colon.

5. Doyen considers that compression of the afferent loop by the colon may cause vomiting. This surely may be prevented by making the afferent loop of sufficient length. I have already endeavoured to show that vomiting after gastro-jejunostomy is often due to simple constipation and there is no evidence from recorded cases that attacks of vomiting are of more frequent occurrence after the anterior than after the posterior operation.

6. Another argument urged against the anterior operation is that it is followed by peptic jejunal ulcer more frequently than is the posterior operation. In my last lecture I endeavoured to show that this statement is not necessarily correct. Even admitting its correctness we must weigh against it the fact that peptic jejunal ulcer following the posterior is a more serious complication than after the anterior operation.

I submit therefore that if there be any difference between the methods as regards the risk of subsequent complications we may fairly argue from the recorded cases that such difference is in favour of the anterior operation. There can be no doubt that the loop, which is a necessary result of either the anterior or posterior operation as usually performed, is a disadvantage. To obviate this defect Petersen has suggested the "no loop" method, in which the portion of jejunum selected for the anastomosis is from one to three inches from its origin. This method has been ably advocated by Dr. W. J. Mayo[31] and by Czerny. Its disadvantages appear to be that it involves more manipulation, and that should any fault develop at the site of anastomosis it would be very difficult to remedy it. A short-circuiting operation between the afferent and efferent limbs of the jejunum would be very difficult, or even impossible. Whether, however, the "no loop" operation will eventually prove the operation of choice remains to be seen.

The after-histories of the patients on whom gastro-jejunostomy has been performed do not assist us in deciding whether the anterior or the posterior operation is the better method. In most instances the results have been admirable, whether the anterior or the posterior operation has been performed. The anterior is admittedly the simpler and less complicated procedure, and our aim should ever be simplicity, provided efficiency is not thereby sacrificed. It rests with the advocates of the posterior operation to show that it is in some way superior to the anterior, and this I submit they have not done. In my own experience the results of the anterior operation leave nothing to be desired. None of my cases, with the exception of the one fatal case to which I have alluded, have caused me the slightest anxiety either during convalescence or at a later period. It is probable that in not a few instances, complications due to faulty technique have been wrongly attributed to the particular method adopted and in this way the anterior operation has been unjustly condemned. Surgery is not yet a completed science, as Erichsen once rashly stated, and the best method of performing gastro-jejunostomy may be still undetermined. For the present I suggest that it is a question for further consideration whether the supposed advantages of the posterior operation rest on a sufficiently sure foundation to warrant us in adopting it as the method of choice.

Pyloroplasty, although in principle good, is unsatisfactory in practice, so far at any rate as concerns the treatment of pyloric stenosis due to ulceration. The after-results are far less satisfactory than those of the operation of gastro-jejunostomy. Mr. J. Rutherford Morison[32] advocates pyloroplasty in preference to gastro-jejunostomy. He says: "It is improbable that so much interference with the anatomy and physiology of digestion as this operation involves can be tolerated without some ill effects." In my last lecture I endeavoured to show that neither clinical nor chemico-pathological evidence justifies such apprehension. Last year Mr. Morison[33] published the results of a series of 28 cases. Of these relapse occurred in four and necessitated gastro-jejunostomy. Caujole[34] records 13 cases which have remained well from ten months to four years. Carle and Fantino[35] state that out of 17 cases the results were perfect in 13 after periods varying from three to seven years from operation. In the remaining four cases the results were less satisfactory, there was "general improvement, but probably gastro-jejunostomy would have given better results." Professor Berg[36] has stated that out of eight cases in which he performed pyloroplasty three subsequently required gastro-jejunostomy. The after-histories of 11 operations by Czerny[37] are not encouraging: one patient died from the operation; one patient died later and the disease proved to be cancer; two showed good results, in one stenosis due to ulceration from gall-stones, in the other to hepatic adhesions; two patients got on well with careful dieting; one patient became addicted to morphine on account of her gastric trouble; two relapsed and required gastro-jejunostomy; and two died, one from duodenal ulcer and one after recurrence of gastric carcinoma.

Out of 22 cases of pyloroplasty which I have collected in nine instances the result can be considered good up to the time the patient was last seen, the interval since operation varying from two to ten years. In 12 of the patients relapse ensued. It is noteworthy that in several of the cases there has been a period of relief for several years after operation, but relapse has subsequently occurred. In gastro-jejunostomy relapse after such an interval is very rare. The patient is either unrelieved from the first or relapses within a few months. These facts suggest that after pyloroplasty recurrence of ulceration is likely to ensue, and therefore it is probable that it has not the same curative

[27] Annals of Surgery, August, 1902.
[28] Verhandlungen des Deutschen Congresses der Chirurgie, 1880, p. 24.
[29] Zeitschrift für Chirurgie, Band xxv., 1887, p. 51.
[30] Centralblatt für Chirurgie, 1883, p. 749.
[31] Annals of Surgery, November, 1905.
[32] Brit. Med. Jour., 1905, p. 778.
[33] Loc. cit.
[34] Thèse de Lyon, 1896, No. 1134.
[35] Archiv für Klinische Chirurgie, vol. xlvi., S. 1, 2.
[36] Brit. Med. Jour., vol. ii., 1900, p. 1000.
[37] Archiv für Klinische Chirurgie, 1898, vol. lvii., p. 461.

effect on gastric ulcer as has gastro-jejunostomy—it seems from published cases that about 27 per cent. of the patients subsequently relapse. Seeing that cases may relapse even after several years it is probable that this under-estimates rather than over-estimates the proportion of relapses, as a considerable number of the cases have been under observation for only two years. An operation which cannot show better after-results than these can hardly be compared with gastro-jejunostomy.

In 1902 Finney described an operation which he called "a new method of pyloroplasty" but which, strictly speaking, is a gastro duodenostomy. It is an improvement on pyloroplasty, but whether it is an efficient alternative to gastro-jejunostomy is doubtful. Last year Finney[38] reported that he had performed his operation 25 times with a mortality of 3 per cent. and that he had collected 112 cases from the literature of gastric surgery, of which ten died, a mortality of nearly 9 per cent. Dr. W. J. Mayo[39] records a series of 58 operations with four deaths, a mortality of close on 7 per cent. The separation of adhesions and the freeing of the duodenum which this method necessitates must entail an increased risk compared with a simple gastro-jejunostomy. Dense and extensive adhesions and a short gastro-hepatic omentum are contra-indications to this method, which consequently is less generally applicable than gastro-jejunostomy. The after-results also, so far as can be determined at present, are hardly so satisfactory. Munro of Boston states that in his hands the operation has not given good results, while Dr. Mayo says that in cases of active ulcer it has not given the same measure of relief as gastro-jejunostomy. He recommends Finney's operation, however, as the operation of choice in selected cases. Mr. Moynihan[40] has performed this operation in two cases, and although both patients recovered and have been relieved, both have suffered from flatulent distension and one of them has had to be most careful in her dietary.

GASTRIC ULCER AND ITS COMPLICATIONS.

The Surgical Treatment of Gastric Ulcer.

To Rydygier[41] belongs the credit of having performed the first operation for the cure of a gastric ulcer. In the year 1881 he resected a large ulcer from the posterior wall of the stomach; his patient recovered and was completely cured. In the following year Czerny successfully performed a similar operation. This field of surgical activity was still further opened up in the year 1893 when Doyen[42] substituted gastro-jejunostomy for excision of the ulcer. This surgeon and Talma[43] of Berlin had independently come to the conclusion that some form of pyloric stenosis, probably spasmodic, is the chief factor in maintaining the hyperacidity which prevents the healing of gastric ulcers. At the German Congress of Surgeons in 1895, Doyen communicated a series of cases in support of his contention. Since that time evidence has been steadily accumulated as to the value of gastro-jejunostomy in the treatment of intractable gastric ulcer and at the present time there is perhaps no more satisfactory operation in surgery. Considerable difference of opinion exists, however, as to the relative merits of excision and gastro-jejunostomy. Rydygier still prefers excision because he believes that the scar of an ulcer may become the seat of carcinoma. Before adopting his opinion we require further evidence as to whether carcinoma *does* develop in a soundly healed ulcer, and if so, with what frequency. Mr. C. W. Mansell Moullin[44] also prefers to deal with the ulcer itself; Mr. Mayo Robson,[45] on the other hand, favours gastro-jejunostomy and reserves excision for a limited number of cases.

There can be little doubt that excision is a more serious operation than gastro-jejunostomy. This is well illustrated by a series of cases from Czerny's clinic which have been analysed by Petersen and Machol.[46] These comprise 107 operations performed for non-malignant disease of the stomach between the years 1882 and 1901. The results were as follows: 85 gastro-jejunostomies with five deaths, a mortality of 5·8 per cent.; 11 pyloroplasties with one death, a mortality of 9 per cent.; four resections of the pylorus with two deaths, a mortality of 50 per cent.; and seven excisions of ulcers with three deaths, a mortality of 42 per cent. These figures do not represent the mortality from these different procedures at the present time. The immediate results are now considerably better. I quote these statistics merely for the purpose of showing the comparative mortality of excision and gastro-jejunostomy.

Even supposing that the mortality from excision be not greater than that from gastro-jejunostomy, excision is probably less efficient because it removes the effect but does not influence the cause. Further, we must bear in mind the undoubted fact that gastric ulcer is frequently multiple, so that after excision the patient may still remain unrelieved owing to the existence of a second ulcer. Gastro jejunostomy, on the other hand, by diminishing acidity and by allowing the entrance of small quantities of bile into the stomach, at least removes the condition which prevents healing of the ulcer. Judging from recorded cases, and considering how much more frequently gastro-jejunostomy has been performed, relapse is much more common after excision than after the short-circuiting operation. Mr. Mayo Robson,[47] Mr. Keetley,[48] Mr. Sinclair White,[49] and many others have recorded cases in which excision has proved unsatisfactory, and Mr. Mansell Moullin[50] himself reports two such cases. After gastro-jejunostomy, on the other hand, relapse is uncommon, but to this point I will return later.

Let us next consider the question, When should surgery interfere in cases of chronic gastric ulcer? (Acute ulcer, apart from the complications of gastrorrhagia and perforation, does not call for surgical measures.) The answer to this question appears to me to depend on three considerations: (1) What is the natural history of gastric ulcer treated medically? (2) the mortality of the surgical treatment proposed; and (3) the prospect of cure after operation.

1. *The natural history of gastric ulcer.*—The mortality from gastric ulcer has been variously estimated by different writers, some placing it as high as 50 per cent. and others as low as 20 per cent. The important point is to determine what proportion of the cases considered to be "cured" remain permanently well. As a contribution to this subject I have collected a series of consecutive cases of gastric ulcer and have, with the assistance of my friend Dr. Herbert Rhodes, endeavoured to ascertain their after-histories. The series comprises 153 patients, all of whom were in the wards of the London Temperance Hospital between January, 1899, to December, 1903, under the care of my colleagues, Dr. Soltau Fenwick and Dr. Parkinson, whom I have to thank for kindly placing the records at my disposal. Of the 153 patients six died in hospital and 147 were discharged as "cured." The term "cure" is here used in a clinical sense, as it was not supposed that the ulcer had completely cicatrised in every case at the time of the patient's discharge. To each of the 147 patients a printed form of questions had been sent with a request that he or she would fill in answers to the various questions asked. When it was not clear from the answer received that the cure was complete the patient was asked to come up to the hospital and was there examined by Dr. Rhodes, upon whose report the patients were divided into several classes. Out of the 147 patients 72 have been traced. All those who have been seen and found to have definite signs of gastric ulcer are classified as "not cured." They are 40 in number. Five patients have subsequently been operated upon, two for hæmatemesis, one for constant vomiting, one for vomiting and hæmatemesis, and one for hour-glass stomach. These five patients in whom medical treatment has failed are also classified as "not cured." One patient died one year later in another hospital and at the necropsy an ulcus carcinomatosum was discovered. This patient is also included among those "not cured." Of the remaining patients 19 have at the present time no signs of gastric ulcer. Five patients are probably "not cured" and two others are "probably cured." So that out of the 72 patients who left the hospital apparently cured only 19 are at the present time free from symptoms of gastric ulcer. Put in tabular form these results are as follows:—

"Not cured"—	
Signs of gastric ulcer	40
Operation subsequently necessary	5
Died from gastric disease	1—46
"Cured"	19
"Probably cured"	2
"Probably not cured"	5
Total	72

[38] Brit. Med. Jour., vol. ii., 1905, p. 773.
[39] Annals of Surgery, November, 1905.
[40] Report at British Medical Association annual meeting, 1905.
[41] Berliner Klinische Wochenschrift, January, 1882.
[42] Revue de Chirurgie, 1896, p. 562.
[43] Indication zu Magenoperationen, Berliner Klinische Wochenschrift, 1895, No. 15.
[44] Brit. Med. Jour., 1903, vol. i., p. 954.
[45] Ibid., 1901, vol. i., p. 258.
[46] Beiträge zur Klinischen Chirurgie, Band xxxiii., 1902, Heft 3.
[47] Clinical Journal, March 2nd, 1904.
[48] THE LANCET, March 9th, 1901, p. 687.
[49] Brit. Med. Jour., vol. i., 1904, p. 421.
[50] Ibid., p. 420.

To avoid any possible exaggeration I will include the five "probably not cured" patients among the "cured." Even so, 64 per cent. of the cases which have been traced have been uncured by medical treatment. Looking at the figures in the most favourable light, at least 31 per cent. of the patients discharged as cured have relapsed, while if the condition of the untraced patients be as unsatisfactory as is that of those who have been traced—and there is no reason to suppose that it would be better—the proportion of relapses would be more than double this figure. When I point out that these patients were in hospital on a strict milk diet for an average period of six weeks and that they were warned to keep on a milk diet for a further period of six weeks and to exercise great care for three more months, the significance of such a large proportion of relapses is apparent. But the worst has not been said. Although 19 of the patients are classified as cured the use of the term is relative, not absolute, and only implies that at the present time these patients are free from symptoms of gastric ulcer. One of them, although quite well at the present time, was in hospital again last year for six months, while another was an in-patient for a shorter period. Only seven out of the 19 patients have remained free from any symptoms of gastric ulcer since they left hospital. Of the 75 patients whom we have been unable to trace it is noted that two of them had been in hospital twice before and ten of them once, so that of the untraced patients 11—i.e., 14 per cent., were the subjects of relapsing gastric ulcer. Considering that this series does not include those patients admitted with perforated gastric ulcer, or those admitted with pyloric stenosis, or other sequels of gastric ulcer I think we may conclude that, so far as hospital patients are concerned, between one-half and two-thirds of the serious cases relapse and that the proportion of real cures is under 25 per cent.

Gastric ulcer in private practice presents a totally different picture. Private patients amid more favourable surroundings more readily bear the necessary restriction of their diet, and relapse is much less common. Consequently operation is not, as a rule, required for the treatment of an existing ulcer but for those cases in which, owing to neglect to commence treatment early, cicatrisation of the ulcer has produced pyloric stenosis, gastric adhesions, or hour-glass stomach.

2. *The mortality of the surgical proceeding proposed.*—I have endeavoured to support the view that the best method of treating an intractable gastric ulcer is by the operation of gastro-jejunostomy. In my first lecture I pointed out that the mortality of this operation in skilled hands is probably not greater than 3 per cent. When it is more fully realised that gastro-jejunostomy does not interfere with the metabolic processes of the human body and that after it patients may live for years in perfect health, doubtless these relapsing cases will be dealt with surgically at an earlier stage and we may reasonably hope that the mortality will be further diminished. Indeed, there is no reason why the operation of gastro-jejunostomy, if performed before the patient has been worn out and emaciated by months or years of suffering, should be attended with a greater mortality than the operation of appendicectomy during a quiescent period.

3. *The prospect of cure by operation.*—The series of cases to which I referred in my last lecture shows how remarkably permanent are the beneficial effects of gastro-jejunostomy. The operations were performed by many different operators and for various conditions, and the results are highly satisfactory. About 85 per cent. of the patients have been completely relieved. I pointed out that if those cases in which a small opening was made or in which a mechanical appliance was used are eliminated the proportion in which the result has been completely satisfactory is 92 per cent. In 49 of the cases it is stated that operation was performed for chronic gastric ulcer. Of these 49 patients, 46 have been completely relieved, which shows that in this series of cases at any rate operation for gastric ulcer has been attended with as equally satisfactory results as operation for pyloric stenosis. Three of my metabolism observations were made on patients upon whom I had performed gastro-jejunostomy for gastric ulcer, and these observations indicate that after operation for this condition a patient can eat with comfort and assimilate a liberal mixed diet as well as an ordinary healthy individual; so that, although as yet we have no pathological evidence that gastro-jejunostomy brings about healing of a gastric ulcer, we have clear clinical evidence that this is the case.

WHEN SHOULD SURGERY INTERFERE IN CASES OF CHRONIC GASTRIC ULCER?

We have now seen that the mortality from gastric ulcer treated medically is at least 20 per cent., and further that at least 50 per cent. of the so-called "cures" relapse, while probably not 25 per cent. of the patients treated medically are really cured. On the other hand, gastro-jejunostomy holds out an almost certain prospect of cure, the proportion of relapses being probably not more than 10 per cent. The immediate risk of operation is about 3 per cent., to which may be added the remote risk from peptic jejunal ulcer of under 2 per cent. I fully realise the danger of advocating operation from comparisons of this sort but at least these figures suggest that the question of surgical treatment should be seriously considered in every case which fails to yield to medical treatment. Tricomi[51] draws a parallel between the treatment of hernia and that of gastric ulcer. He proposes that as hernia is treated radically, so all cases of gastric ulcer should be treated radically by the operation of gastro-jejunostomy. The facts scarcely warrant this comparison, but I think that we may fairly compare the surgical treatment of gastric ulcer with the surgical treatment of appendicitis. The mortality from this disease treated medically is, according to Dr. H. P. Hawkins, 14 per cent.—that is, at least 6 per cent. less than the mortality from gastric ulcer treated medically. It is considered good surgery to operate after a first attack of appendicitis which does not clear up after six weeks or two months, or if subsequently the patient has a second attack. May we not apply similar principles to the more serious disease of gastric ulcer? Leube says that if a gastric ulcer is not cured by four or five weeks of treatment it will not be cured by medical treatment alone. Allowing a wider latitude than this, may we not formulate the principles on which to act as follows: If after six weeks' complete rest on a milk diet, a further period of six weeks on a milk diet with comparative rest, followed by three months' careful dieting, the patient is not free from definite symptoms, or if after apparent cure the patient has a relapse, operation is probably in the best interests of the patient. The symptoms, however, must be clear and definite. The performance of gastro-jejunostomy in cases of vague gastric disorders, unaccompanied by definite clinical or chemical signs, cannot but lead to the discrediting of a valuable and, in suitable cases, legitimate operation.

GASTRORRHAGIA.

Gastrorrhagia or gastric hæmorrhage is made evident by hæmatemesis or melæna or by both and is a frequent symptom of both acute and chronic gastric ulcer. In a number of the cases in which operation has been undertaken for gastric hæmorrhage no definite ulcer has been found but examination of the interior of the stomach has revealed a number of distinct and separate bleeding points. More than 30 years ago Murchison[52] reported two cases of fatal hæmorrhage from minute ulcers which had perforated a small artery in the stomach wall. He observes that "they are remarkable for the minuteness of the ulcers, which are little more than hæmorrhagic erosions, but also for the absence of the usual symptoms of ulceration of the stomach. Neither of the patients had suffered from vomiting prior to the occurrence of the hæmorrhage." Chiari[53] in 1882 described a similar case. More recently Dieulafoy[54] has recorded a considerable number and has divided them into two groups—simple erosions and exulceratio simplex. The simple erosions appear to be mere abrasions of the gastric epithelium. In such cases the gastric mucous membrane when examined during life appears studded with minute bleeding points, probably the initial stage of the ordinary round ulcer of Cruveilhier. In exulceratio simplex there is greater destruction of tissue, so that the minute arteries beneath the muscularis mucosæ are exposed. Both varieties may give rise to alarming hæmorrhage. I have seen another variety which so far as I know has not been described. On opening a stomach on account of an extremely severe attack of hæmatemesis a raised, vividly red patch of the size of half a crown was observed. No loss of substance was apparent and the surface was oozing blood seemingly from the acuteness of the inflammation. The wound was sewn up

[51] Revue de Chirurgie, Feb. 10th, 1899.
[52] Transactions of the Pathological Society, 1870, vol. xxi., p. 162.
[53] Prager Medicinische Wochenschrift, 1882, vol. vii., p. 489.
[54] Clinique Médicale de l'Hôtel Dieu, 1899, pp. 1-62.

again and the patient had no further trouble, so that in the light of the after history the operation was unnecessary.

Since Dr. W. Soltau Fenwick [55] pointed out the clinical and pathological distinctions between acute and chronic ulcers most cliniciars are agreed that hæmatemesis due to an acute ulcer presents a totally different clinical picture from the hæmatemesis which results from a chronic gastric ulcer and this difference has an important bearing on the surgical treatment of the bleeding. The pathology of the bleeding in acute ulcer and in simple erosion is so similar that we need not draw any distinction surgically between these two varieties. In acute ulcer, according to Dr. Fenwick,[56] severe hæmatemesis is the first indication of the disease in 75 per cent. of the cases. The hæmorrhage is usually due to erosion of a small branch of the coronary artery and is sudden and profuse, so that as much as a pint or more may be lost in a few minutes. As a rule, nature's means of arresting hæmorrhage—namely, the contraction of the artery aided by the diminution of the heart's action due to loss of blood—are sufficient to stay the bleeding. The artery becomes occluded by the formation of an internal and external clot and the hæmorrhage is rarely repeated. In hæmorrhage from a chronic ulcer, on the other hand, there is almost invariably a history of chronic dyspepsia for months or years. The amount of the bleeding varies from a minute quantity only detected by an examination of the fæces for hæmin crystals, to an amount so great as to lead to an immediately fatal issue (*l'hémorragie foudroyante*), although such an event is fortunately rare. As a rule, the hæmorrhage is less copious and less alarming than that from an acute ulcer. There is also this important difference. The hæmorrhage from an acute ulcer once arrested is seldom repeated, the hæmorrhage from a chronic ulcer tends to recur after a quiescent interval, until the patient is reduced to a condition of profound anæmia by repeated hæmorrhages. It is repetition of the hæmorrhage from a chronic ulcer which is so characteristic and of such serious import. What is the reason of this difference? In acute ulcer there is little or no induration around the ulcer, the arteries are not thickened by inflammatory infiltration, the tissues are soft and yielding, and consequently nature is able to use her own means for the arrest of hæmorrhage. In a chronic ulcer the eroded artery is thickened by chronic inflammation and lies in rigid, indurated tissues, and so cannot close the opening in its wall by contraction. The formation of a clot is sufficient to arrest the bleeding temporarily, but the clot exposed to the gastric juice and discharge from the ulcer becomes disintegrated and leads to the recurrence of the hæmorrhage.

The Surgical Treatment of Gastrorrhagia.

The first suggestion of surgical intervention for gastric hæmorrhage was made by Rydygier in the year 1882. His suggestion, like many other original propositions, was received with coldness, and it was not until five year later that Mikulicz performed the first operation for hæmorrhage from a gastric ulcer, while it was reserved for Professor Roux [57] of Lausanne, whose brilliant work I have had the privilege of witnessing, to have the credit of performing the first successful operation of this nature. In this case the source of the bleeding was the coronary artery and he excised the ulcer and ligatured the artery on either side of the bleeding point. There is considerable difference of opinion as to when to interfere in cases of gastric hæmorrhage. At present few are prepared to agree with Dieulafoy's opinion that operation should be performed *during* the first bleeding if as much as half a litre of blood is lost or if after loss of a smaller quantity the hæmorrhage is repeated within 24 hours. Dieulafoy believes that a third attack is likely to prove fatal, a view which, though not generally accepted, is in some measure supported by the facts recorded by Savariaud.[58] Granted, however, that surgical measures are sometimes indicated, the questions arise, In what class of case should we operate? When should we operate? and How should we operate?

1. *In what variety of gastric hæmorrhage is operation indicated?*—By recognising the distinction between bleeding from an acute ulcer, or from a simple erosion, and bleeding from a chronic ulcer, we can form pretty clear indications for surgical treatment. This point has been well brought out in a paper by Mr. Moynihan.[59] Pathologically, we may classify hæmorrhage from an acute ulcer as a primary hæmorrhage and bleeding from a chronic ulcer as a form of secondary hæmorrhage, and we can apply some of the principles which guide us in the treatment of primary and secondary hæmorrhage in other regions of the body. The first general principle in the treatment of primary hæmorrhage is that no operation should be performed on an artery unless it bleeds. Therefore in hæmorrhage from an acute ulcer, when once the bleeding has ceased whether spontaneously or by the aid of medical art, we should hesitate to interfere. There is a reasonable expectation that the bleeding vessel will become securely occluded. If, in spite of absolute rest, the hæmorrhage starts anew, we may safely conclude that nature has failed, and if the second hæmorrhage has been a severe one surgery must step in. *But*, and this is an important point, absolute rest must have been tried and have failed. I emphasise this because in several of the cases I have seen, the second attack of hæmorrhage has been apparently recurrent or reactionary, due to displacement of the clot from too early stimulation or injudicious moving of the patient. This has also been the case in some at least of the recorded cases. In these circumstances we may fairly give nature one more chance before deciding on operation. In bleeding from chronic ulcer our guide must be the first general principle laid down for the treatment of secondary hæmorrhage—namely, that even if the bleeding has ceased an operation is necessary to prevent its return. Of course, the degree of bleeding must be taken into account. Just as in slight secondary hæmorrhage elsewhere we would first try simpler means, so an operation is not necessarily indicated after every slight hæmorrhage from a chronic gastric ulcer. We must remember, however, that in chronic ulcer it is probably not mechanical displacement but septic disintegration which starts the bleeding afresh, so that it is probable that the hæmorrhage will be repeated. Therefore, if the patient has already lost a considerable amount of blood an operation is advisable to prevent the serious and possibly fatal result of further loss. In hæmorrhages which, although slight, are frequently repeated the indication for operation is also clear. The risk of operation, if undertaken during a quiescent interval, is probably less than the risk from further hæmorrhage and the patient gains a double advantage, prevention of further hæmorrhage and cure of the gastric ulcer.

2. *When should we operate?*—Mikulicz [60] took a very pessimistic view of the results of operation during the progress of acute hæmorrhage. He operated on four cases with only one recovery. Billroth has had no better results. In the discussion on Mikulicz's paper Korte [61] gave similar testimony. In spite of isolated successes the weight of evidence seems against operating during the progress of the hæmorrhage; the collapse induced by the loss of blood is favourable for the arrest of hæmorrhage but unfavourable for operation, and there is not, as in perforation, the risk of increasing peritonitis through delay. Further, in by far the greater number of instances, it is not the initial hæmorrhage which causes death, but the repetition of it before the patient has recovered from the resulting anæmia. It is always dangerous to lay down hard-and-fast rules. To do so may give those who come after us cause "to reflect on the vanity of received opinion" but both from the cases I have seen and from a study of the recorded cases I think it is open to grave doubt whether it is ever expedient to operate during the progress of gastric hæmorrhage. The number of cases in which the hæmorrhage is immediately fatal is very small and the percentage mortality of such cases is less than the mortality of operation during gastric hæmorrhage. There are quite a number of cases on record (and I have seen three myself) in which the stomach has been opened for acute hæmorrhage without the discovery of any definite localised source of bleeding. The stomach has been sewn up and the patient has recovered. Operation has thus been an unnecessary complication to the patient's convalescence. Such cases emphasise the advisability of trusting to nature more and resorting to surgery less in the treatment of acute gastric hæmorrhage.

3. *How should we operate?*—Many different procedures have been adopted. Mikulicz, in the four cases to which I have already alluded, applied the thermo-cautery to the base

[55] Ulcer of the Stomach p. 59, and Transactions of the Pathological Society, 1892.

[56] Loc. cit., p. 182.

[57] Congress of French Surgeons, 1895.

[58] De l'Ulcère Hémorragique, Paris, 1898.

[59] Transactions of the Royal Medical and Chirurgical Society, vol. xxxv., p. 519.

[60] Centralblatt für Chirurgie, 1897, p. 69.

[61] Ibid.

of the ulcer. Three of the patients died within 24 or 48 hours. The same method was employed by Korte, but the hæmorrhage continued until the death of the patient eight days later. In other cases the ulcer has been excised, ligatured *en masse*, or packed with iodoform gauze, and in others gastro-jejunostomy has been performed. In cases in which no definite ulcer has been found the bleeding points have been picked up and ligatured *en masse*.

If we can rely on gastro jejunostomy to prevent recurrence of the hæmorrhage it is undoubtedly the simplest procedure to adopt, and we are steadily accumulating evidence that an efficient short circuit between the stomach and jejunum is an effective method of treating gastric hæmorrhage. Mr. Mansell Moullin[62] advocates dealing with the bleeding point either by ligature *en masse* or by excision of the ulcer. He urges in support of his view that there are at least two cases on record in which bleeding has persisted in spite of gastro-jejunostomy, and he himself has had a case in which one attack of hæmatemesis followed this operation. That hæmorrhage does sometimes occur after gastro-jejunostomy is not open to question, but such cases are rare, and I believe that the majority of them come under one of three categories. First, those in which malignant disease exists; secondly, those in which a mechanical appliance has been used to effect the anastomosis; and, thirdly, those in which the anastomotic opening has become, or was originally, inefficient. We cannot expect gastro-jejunostomy to stay effectively the progress of malignant disease, neither can an inefficient opening give that physiological rest to the stomach which is necessary to secure permanent occlusion of the bleeding point, nor is the presence of a Murphy's button conducive to that end. In the Museum of St. Bartholomew's Hospital is a specimen (No. 1951, C) which appears to show that fatal hæmorrhage may ensue from the granulating area caused by the pressure of the button on the tissue surrounding the opening. There is a specimen (No. 2427, O) in the Museum of the Royal College of Surgeons of England which was obtained from a patient who died from hæmatemesis 14 days after gastro-jejunostomy. At the necropsy it was shown that water injected into the stomach did not escape through the efferent opening and I have seen another case in which a similar condition obtained. In some of the recorded cases it is stated that regurgitant vomiting accompanied the hæmorrhage, a fact suggesting obstruction of the anastomotic opening. Mr. Mayo Robson has recorded an instance of fresh hæmorrhage one month after gastro-jejunostomy but both he and Mr. Moynihan have related numbers of cases in which this operation has been performed for hæmorrhage with permanently successful results. It is noteworthy that the only fatal case in Mr. Moynihan's series in which hæmorrhage was the indication for operation, was one in which he excised the ulcer but did not perform gastro-jejunostomy. The old rule of surgery to cut down upon and to tie the bleeding vessels requires modification in the light of modern experience. That we must look our enemy in the face is an aphorism that sounds well but which if applied in every case may lead to injudicious surgery. The indirect method of treatment by gastro-jejunostomy is simpler and the proportion of failures is exceedingly small. There is no doubt that in many instances excision of the ulcer does effect a cure, but it is not readily applicable when the ulcer is on the posterior wall of the stomach, the situation of most ulcers which bleed. Further, it may prove ineffectual when a second bleeding but undiscovered ulcer exists. Ligature of the bleeding points *en masse*, while satisfactory in many instances, appears less dependable than gastro-jejunostomy. I have collected the results of 12 cases treated in this way. One patient under the care of Sir Dyce Duckworth and operated on by Mr. H. T. Butlin[63] has remained perfectly well ever since the operation. Of three others which I have seen myself one patient died shortly after operation, while the other two have had several attacks of hæmatemesis. In a series of six cases recorded by Mr. Mansell Moullin[64] one patient has had hæmatemesis as much as before operation, while two others, although free from further bleeding, have suffered from vomiting which gastro-jejunostomy would possibly have relieved.

Supposing that after opening the stomach the bleeding point is not discovered, what is to be done? Clearly, if the hæmorrhage has been repeated in such quantity or so frequently that an operation is justifiable, gastrotomy alone is not likely to prevent its return. I have seen the abdomen opened twice in such cases, and both patients have had fresh attacks of hematemesis, one of them has been in other hospitals twice since operation, while the other had gastro-jejunostomy performed subsequently at St. Thomas's Hospital. Mr. Mansell Moullin, it is true, has published a case in which there has been no recurrence of hæmatemesis during the two and a half years which have elapsed since the patient left the hospital. Such an event, however, is exceptional. If the hæmorrhage is such as to necessitate operation the probability is that it will recur if nothing more than an exploratory operation is performed. Is it then not better practice to perform gastro jejunostomy immediately without opening the stomach to search for the bleeding point?

Gastro-jejunostomy possesses these advantages, that it is applicable equally to cases of acute or chronic ulcer, it renders opening the stomach unnecessary, and it can be performed in a very short time. Further, having decided that operation is necessary, we start with a definite procedure in view, whereas an attempt to localise the source of bleeding may lead to a prolonged operation on a patient little able to bear it. Human nature being what it is, it is difficult to stay our hand if we do not at once discover the source of the bleeding which we seek. Before leaving this subject may I offer for your consideration the suggestions which I have drawn up for my own guidance in these difficult cases?

In hæmorrhage from an acute ulcer, erosion, or exulceratio simplex, that is, when the onset of bleeding is sudden and previous history of gastric ulcer is absent, first give a thorough trial to absolute rest in bed, Trippier's hot-water injections by the rectum, and avoidance of food by the mouth for at least four or five days. If a second profuse hæmorrhage occurs perform gastro-jejunostomy, provided it is quite clear that the second hæmorrhage has not been brought on by want of absolute rest, by too early stimulation, or by too early administration of food. It is advisable to delay operation until the patient has recovered from the collapse induced by the hæmorrhage. In hæmorrhage from a chronic ulcer, that is in cases with a definite history of pain after food, vomiting, and possibly previous slighter attacks of hæmatemesis, perform gastro-jejunostomy after one severe attack or after several slighter attacks of hæmatemesis if the loss of blood is causing serious anæmia.

HOUR-GLASS STOMACH.

The first accurate description of the condition known as hour-glass stomach was given by Morgagni.[65] Usually the constriction is in the middle third of the stomach, sometimes near the pylorus, and less frequently near the cardiac end. In many of the specimens which I have examined the communication between the two pouches is much narrower than the external appearance of the stomach would suggest. Indeed, it is of practical importance to recognise that examination of the exterior surface of the stomach may give little indication of the serious constriction within. In one of my cases there was only a slight puckering on the anterior wall of the stomach but internally an annular stricture so tight that it only admitted the tip of my little finger.

Two varieties of hour-glass stomach have been described—the congenital and the acquired, but recently Mayo Robson and Moynihan[66] have raised a doubt as to the occurrence of hour-glass stomach as a congenital deformity. They point out "that in many, if not in all, of the so-called congenital cases ulceration was present in some part of the stomach." A perusal of the recorded cases and an examination of the specimens in the London museums have led me to a similar conclusion. The cases brought forward by Carrington[67] have been generally accepted as undoubted examples of congenital deformity but in all of them there were either ulcers or scars of previous ulcers or adhesions. The presence of ulcers or scars was also noted in the cases recorded by Roger Williams,[68] Hirsch,[69] and Hudson.[70] Hudson assumed that the ulceration was secondary to the constriction and due to the irritation of retained food. Equally it is open to us to assume that the constriction was secondary to ulceration. Sievers[71] records a case of

[62] Brit. Med. Jour., vol. ii., 1903, p. 985.
[63] Ibid., p. 987.
[64] Ibid., vol. i., 1904, p. 420.

[65] Morgagni.
[66] Diseases of the Stomach, p. 173.
[67] Transactions of the Pathological Society, vol. xxxiii., 1882.
[68] Journal of Anatomy and Physiology, vol. xvii., 1883.
[69] Quoted by Watson, loc. cit.
[70] Brit. Med. Jour., vol. ii., 1886, p. 973.
[71] Ibid., 1899, vol. ii., Epitome, p. 9; and Berliner Klinische Wochenschrift, April 10th, 1899.

"congenital" hour-glass stomach in a woman, aged 38 years, who died from suppurative peritonitis due to perforation of a gastric ulcer in the pyloric pouch. No macroscopic or microscopic evidence of pathological change could be discovered in the constricted area. Now a very small ulcer may lead to very extensive contraction and the scar of an ulcer is so difficult to detect hidden as it may be in the folds of mucous membrane, that unless sections of every portion of the constriction are examined, the scar of a healed ulcer may easily be overlooked. As regards Hudson's hypothesis that the ulceration in these cases is secondary, it is at least suggestive that in Sievers's case the ulcer which perforated was on the distal side of the constriction and not in the cardiac pouch where the stagnation and irritation of food must have been greater. It is a striking fact that in all the cases which I have been able to discover symptoms were absent during early life. Thus, in Sievers's case the patient was quite well until the age of 26 years, and in Hirsch's case gastric symptoms began at the age of 16 years, and gradually increased after the age of 40 years, so that during the last ten years of her life the patient was unable to take solid food. This absence of symptoms in early life is difficult to reconcile with the hypothesis of a congenital origin, while the appearance of symptoms between the ages of 15 and 30 years is strongly suggestive that gastric ulcer is the causal factor. It is, too, most significant that, so far as I can ascertain, no instance of an hour-glass stomach in a fœtus has yet been recorded. Possibly the following observation may explain some of the specimens of so-called congenital cases. I was present at a post-mortem examination when an apparently typical specimen of hour-glass stomach was discovered. Through an oversight the specimen was not put at once into formalin. On examination of the specimen next day I found that all trace of the constriction had vanished, and presumably what had appeared to be constriction was really only a muscular contraction which had persisted for some time after death. Had the specimen been placed immediately in some hardening reagent doubtless I should have presented it before you to-day as a typical example of congenital hour-glass stomach. The cases of Hochenegg, Doyen, and Cumston are described as congenital, but in all of them there was evidence of ulceration. In Doyen's[74] case the stomach had become adherent to the anterior abdominal wall and on separation of the adhesions a perforation of the stomach wall was discovered.

The Surgical Treatment of Hour-glass Stomach.

I have collected a series of 92 operations for non-malignant hour-glass stomach. Through the courtesy of the various operators I have been able to ascertain the after results in 61 out of the 76 patients who survived operation. These after-histories give valuable information as to the permanency of the relief afforded by the different surgical procedures adopted. From a perusal of the cases it appears that the following operations have been performed for this condition: (1) gastroplasty (in some cases with resection of the ulcer); (2) gastro-gastrostomy; (3) gastro-jejunostomy; (4) gastro-duodenostomy; and (5) dilatation.

The operation of gastroplasty was first performed by Bardeleben in the year 1889. The technique is similar to that adopted in pyloroplasty. A transverse incision, at least four or five inches in length, is made through the anterior wall of the stomach, the centre of the incision being over the hour-glass constriction. This incision is then sewn up vertically by two continuous sutures, the inner including all the coats of the stomach, the outer the peritoneal coat only. I have found the use of Mayo Robson's largest bone bobbin a great comfort in this operation, for by its employment one is assured that after the suturing is finished there is a sufficient and efficient opening between the two pouches, and one is spared the uncomfortable feeling that during the suturing the opening may have been unduly narrowed.

Gastro-gastrostomy was first performed by Wölfler[73] in 1894. He made a vertical incision into both pouches and then sutured the two openings together. In 1895 Sedgwick Watson[74] modified this method. He folded the pyloric compartment of the stomach over the cardiac, using the constriction as a hinge, and made the incisions into the two pouches transverse instead of vertical. Watson's patient has remained in good health ever since the operation, but his method is more complicated than Wölfler's original procedure.

In many cases gastro-jejunostomy alone is not sufficient, for if the jejunum be united to the stomach on the cardiac side of the constriction the pyloric pouch is still undrained, while if the anastomosis be made to the pyloric pouch, the obstruction to the exit of food from the cardiac pouch still persists and the patient will be no better off than before. Weir and Foote have suggested a double gastro jejunostomy—that is, an anastomosis of the jejunum to both pouches.

The importance of seeing and examining the whole stomach from the œsophagus to the duodenum is emphasised by two of the recorded cases in which the pyloric pouch was mistaken for the whole stomach. Gastro-jejunostomy was performed on the distal side of the obstruction and the mistake was undiscovered until the necropsy. In some of the cases two constrictions exist, dividing the stomach into three pouches, the so-called trifid stomach, while in many instances hour glass stomach is complicated by pyloric stenosis, facts which, as Mr. Moynihan has pointed out, support the proposition that gastric ulcer is frequently multiple. If when pyloric stenosis exists gastroplasty alone be performed a further operation may be necessary, as in at least one recorded case. Of the 92 cases which I have collected 16 patients died as the result of the operation and 76 recovered. Many of the patients, however, were in bad condition for operation, being worn out by prolonged pain and vomiting. Of the 16 fatal cases, in three the pyloric pouch was mistaken for the whole stomach and gastro-jejunostomy was performed on the pyloric side of the constriction. In two cases death was due to septic peritonitis the result of the cutting through of the sutures which had been passed through the indurated area. One case died from perforation of another ulcer and another died one month after operation from hæmatemesis. Possibly these two last-mentioned deaths might have been prevented by the addition of gastro-jejunostomy to the procedure adopted but in this connexion it is only fair to point out that in one case death is supposed to have been due to perforation 12 days after gastro-jejunostomy, although in the absence of a necropsy this supposition could not be verified.

THE REMOTE RESULTS OF OPERATION.

I will now briefly analyse the results of the various procedures which have been adopted.

Gastroplasty.—39 patients recovered after the operation of gastroplasty. Of these, 16 have been completely relieved up to the time of inquiry, while seven patients gained immediate relief, but their subsequent condition is unknown or unobtainable. In three patients the relief obtained has not been absolutely complete. In nine patients an interval of relief was succeeded by relapse. On two of the patients who relapsed gastro-gastrostomy was subsequently performed, successfully so far as the immediate result was concerned, but followed by relapse later. On another patient a second gastroplasty was performed, since which complete relief has been obtained, while on the remainder of the patients who relapsed gastro-jejunostomy was performed later with complete relief in two of them, the later condition of the third patient being unknown. In one patient operation gave no relief, while of three others I have no information. Thus of the 39 patients who recovered from the operation of gastroplasty 10 or 25 per cent. either obtained no relief or had recurrence of symptoms.

Gastro-gastrostomy.—13 patients recovered from the operation of gastro-gastrostomy. Three of them have been completely and apparently permanently relieved, while one patient has been relieved except that three years ago she had one attack of hæmatemesis. One patient was completely relieved, but died from other causes during her puerperium three and a half years later. In one patient operation gave no relief. In three instances relapse followed an interval of relief, two of these being patients upon whom gastroplasty had previously been performed. Two patients were relieved by operation but their later history is unknown. Two patients cannot be traced. Thus no relief was obtained or relapse occurred in 30 per cent. of the patients who recovered from gastro-gastrostomy.

Gastro-jejunostomy (*primary*).—15 patients recovered of the 19 upon whom gastro-jejunostomy was performed as a primary operation. Of these, ten have been completely relieved and in three others relief followed operation, but their subsequent history I have been unable to obtain.

[73] Doyen: Traitement Chirurgique des Affections de l'Estomac, 1895 p. 305.
[73] Beiträge für Klinische Chirurgie, 1895, No. 13, Heft i., p. 221.
[74] Annals of Surgery, July, 1900.

Complete relapse ensued in one patient in whom the jejunum was united to the cardiac pouch of an hour-glass stomach, while a second patient, on whom a similar anastomosis was performed, was unrelieved until a second anastomosis was made between the jejunum and the pyloric pouch. This was attended by complete relief. In three patients gastro-jejunostomy was performed secondarily after failure of gastroplasty, of whom two have remained perfectly well, while the later condition of the other is unknown. In one case gastro-jejunostomy was performed with complete success after failure of a previous gastro-gastrostomy.

Gastroplasty with gastro-jejunostomy.—In six patients gastroplasty was combined with gastro-jejunostomy. Five of them recovered and have remained perfectly well, but in some of them the operation has been comparatively recently performed.

Gastro-gastrostomy with gastro-jejunostomy.—In three patients gastro-gastrostomy was combined with gastro-jejunostomy and in all of them recovery and complete relief has ensued.

Excision of the ulcer at the seat of constriction, without gastro-jejunostomy, was practised in two instances; one of them died and the other remained well for a time but a later report states that the symptoms are returning and that a gastro-jejunostomy will probably be necessary.

Gastroplasty with pyloroplasty was performed in one case with a fatal result.

Pylorodiosis with gastro-jejunostomy was performed once and the patient died.

Gastro-duodenostomy was performed twice, one patient died, while the other recovered and has been completely relieved.

Dilatation of the constriction with gastro-jejunostomy.—This was practised in one instance, but the remote condition of the patient is unknown.

Dilatation of the constriction was performed in one patient. This case is remarkable as the induration of the swelling and the presence of enlarged glands suggested malignant disease, a view supported by the absence of free hydrochloric acid and the presence of lactic acid in the stomach contents, yet the patient is now alive and well four years after the operation.

For the sake of greater clearness I give these statistics in tabular form:—

SUMMARY OF OPERATIONS FOR HOUR-GLASS STOMACH.

Gastro-plasty: 43 operations, 4 deaths.

Complete relief	16
Relief, but not perfect	3
Unrelieved	1
Relapsed	9
Relief, but subsequent history unknown	7
Untraced	3
Total	39

Gastro-gastrostomy: 14 operations, 1 death.

Complete relief (one patient has had hæmatemesis once)	4
Relieved, but died from other causes	1
Relieved, but remote result unknown	2
Unrelieved	1
Relapsed	3
Untraced	2
Total	13

Gastro-jejunostomy: 19 operations, 4 deaths.

Completely relieved	10
Relieved, but remote result unknown	3
Unrelieved until after second operation	1
Relapsed	1
Total	15

Gastro-jejunostomy subsequent to gastroplasty: 3 operations.

Complete relief	2
Remote result unknown	1
Total	3

Gastro-jejunostomy subsequent to gastro-gastrostomy: 1 operation with relief.
Gastroplasty with gastro-jejunostomy: 6 operations—recovery and complete relief in 5; 1 died.
Gastro-gastrostomy with gastro-jejunostomy: 3 operations, recovery and relief in all.
Excision of ulcer: 2 operations, 1 died, 1 recovered and relapsed.
Gastroplasty with pyloroplasty: 1 operation, 1 death.
Pylorodiosis with gastro-jejunostomy: 1 operation, 1 death.
Gastro-duodenostomy: 2 operations, 1 completely relieved, 1 death.
Dilatation with gastro-jejunostomy: 1 operation, recovery, but remote history unknown.
Dilatation: 1 operation, complete relief.

Conclusions.—While gastroplasty is the simplest method of dealing with hour-glass contraction it is open to the same objection as pyloroplasty for pyloric stenosis—namely, the frequency with which relapse ensues. In at least 25 per cent. of the patients who have recovered either no relief has followed or relapse has occurred subsequently. This especially happens when there is any active ulceration at the time of operation, while even if there be no active ulceration recurrence is not improbable for two reasons. First, gastroplasty is not a preventive of gastric ulcer and does not modify the conditions predisposing to gastric ulceration which presumably are present in these cases. Secondly, adhesions are frequently present which impair the motility of the stomach and keep up a certain degree of gastric stasis. This leads to hyperchlorhydria, which in its turn causes, or at least predisposes to and keeps up, ulceration. The same criticism applies to the operation of gastro-gastrostomy. At least 30 per cent. of the patients on whom this operation has been performed have either obtained no relief or have relapsed.

It appears therefore advisable when either gastroplasty or gastro gastrostomy is done to perform gastro-jejunostomy at the same time. It is noteworthy that only two of the patients on whom gastro-jejunostomy was performed have had recurrence of symptoms, and in one of these this was clearly due to the co-existence of pyloric stenosis, while not one of the eight patients upon whom the double operation has been performed have yet shown signs of relapse. Possibly anastomosing a loop of jejunum to both the cardiac and the pyloric pouches, as has been suggested by Weir and Foot, will prove efficient, and it is probably simpler than either of the combined operations just mentioned. It has the further merit that it does not necessitate cutting into or operating on the diseased area. In principle it seems the best method and I think it will probably become the method of choice. Monprofit's operation, a gastro-jejunostomy "en-Y" to each pouch, appears to be unduly complicated and unnecessarily severe.

From the remote results of the cases I have collected I think we may conclude that howsoever details may be modified gastro-jejunostomy must form part of the method adopted. In this disease, as in so many other gastric disorders, gastro-jejunostomy is our sheet-anchor.

The Hunterian Lectures

ON THE

PHYSICAL ANTHROPOLOGY AND ETHNOLOGY OF BRITISH NEW GUINEA.

Delivered before the Royal College of Surgeons of England on Feb. 12th, 14th, and 16th, 1906.

BY CHARLES G. SELIGMANN, M.B. LOND., M.R.C.P. LOND., F.Z.S.

LECTURE III.[1]

Delivered on Feb. 16th.

MR. PRESIDENT AND GENTLEMEN,—The Trobriand group lies some 50 miles north of Fergusson and I believe holds no direct communication with the d'Entrecasteaux. About 100 miles east and somewhat to the south of the Trobriands lies Murua, the Woodlarks, which is also about 100 miles due north of the Louisiades. Between the Trobriands and Murua is the line of the Marshall Bennet group, comprising the raised atoll islands, to which I have already referred. Although the inhabitants of the Trobriands and Murua undoubtedly belong to the Papuo-Melanesian group and share with the other archipelagoes many of their chief social and cultural characteristics, the Trobriand and Marshall Bennet groups are differentiated socially by their recognition in each district of a royal family in which descended a hereditary chiefship which really commanded respect. Under the paramount chief for each district there are a number of village chiefs, one in each village, who have a certain amount of authority. In the

[1] Lectures I. and II. were published in THE LANCET of Feb. 17th, 1906, p. 421.

Woodlarks, as far as we could ascertain during our brief visit, this system did not exist. In all these islands, though not here exclusively, the big sea-going canoes—waga—are built, and it is in these islands that the decorative art characteristic of the whole Massim district has reached its highest expression in the carving of the ornaments for the prows of the waga.

A large number of skulls have been examined from Murua. A collection of 37 brought back by Loria have been examined by Sergi,[2] while for the figures relating to 40 collected by the Daniels Expedition I am indebted to Dr. W. L. H. Duckworth who is working on the expedition craniological material. The figures given by these two collections vary considerably as to the prevalence of dolicho- and brachycephaly. In both collections the percentage of mesaticephalic skulls is about 40 (43·2 in the former and 40 in the latter), but while 29·7 and 27·8 per cent. of Sergi's skulls are respectively dolichocephalic and brachycephalic, in our skulls there are 52 per cent. of dolichocephals. The average of cephalic index for Sergi's skulls is 79; that for those collected by the Daniels Expedition is 75 (minimum 68, maximum 83). On combining the two collections dolichocephals and mesaticephals both occur to the extent of about 40 per cent. (40·2 per cent. and 41·5 per cent.), while the remaining 18 per cent. are brachycephals. It is not stated on which part of the island Sergi's collection was made; our skulls were obtained from exposures in shallow caves and crevasses in the dolomitic cliffs about seven miles west of Mapas Island. Measurements of six men of Suloga village were taken; all of these were mesaticephals or brachycephals varying from 78 to 85, and giving an average of 80·5.

Although in many places—e.g., in Milne Bay—the natives told us that different clans might be recognised by their "gia," explained as meaning nose and in a broader sense face, we were never able to see that the differences alluded to occurred with particular constancy in a given clan. This result might be expected when it is remembered that no one can marry into his own—i.e., his mother's—clan and that often he cannot marry into his father's clan. But apart from any question of clan, we were able to recognise in natives of Murua, the Trobriands, and the Marshall Bennets, two more or less constant extreme types, to one or other of which the majority of the male population inclined. The

FIG. 10.

Long- and broad-faced types of Marshall Bennet islanders.

chief difference in these types can be expressed by the nasal and facial indices. In one the nasal index is lowly mesorhine or even leptorhine and the face leptoprosopic, while in the other type a platyrhine or even hyperplatyrhine nose is associated with a mesoprosopic or euryprosopic face. It did not seem that these linked qualities were specially associated with brachycephaly or dolichocephaly or with the quality of the hair, though it seemed clear that the long-faced type was in any given community generally taller, and often very notably so, than the individuals of the short-faced broad-nosed type, in whom the bridge of the nose is often low. Further, although we did not measure any Trobriand chiefs, the only two members of the royal house we came in contact with were of the long-faced, tall type. Again, at Suloga on Murua and at Gawa in the Marshall Bennets it was clear that certain men, who seemed to possess in a special measure the confidence of their comrades and who certainly showed a degree of initiative or a readiness to help us in carrying out our plans which the majority of their companions did not, were of this type. The facial characteristics of the two types referred to are well seen in Fig. 10.

The Marshall Bennet group is inhabited by short people (average 1577 millimetres—i.e., about 62 inches), whose hair is often curly. Their skin colour is the usual South-Eastern colour—viz., a bronze brown. Measurements of 15 men from Gawa and Kwaiawata (average cephalic index 80) show that these islanders are predominantly brachycephals or high mesocephals, the latter conclusion being borne out by the average cephalic index of 77 (minimum 70, maximum 91) derived from measurements made by Dr. Duckworth of 35 skulls collected on Kwaiawata. These are the skulls of the islanders that, after an elaborate preparation, are kept in the houses of their dead relatives. Here, as at Murua, two types—one leptorhine or mesorhine and leptoprosopic, the other platyrhine and generally euryprosopic—could be distinguished, and the same holds good for the Trobriands who in custom and culture appear to be one with the Marshall Bennet group. Physically, however, the Trobriand people seem rather taller and tend more to mesocephaly, the average stature of 20 Trobriand men being 1609 millimetres (about 63½ inches) with an average cephalic index of 78 (minimum 72, maximum 84). Like the Marshall Bennet islanders their hair is often wavy.

Reference has already been made in connexion with the Eastern Papuans to an immigrant stock found on the south-eastern coast of British New Guinea. The folk of this stock extend along the coast westwards from Aroma in the east to the valley of the St. Joseph in the west, a distance of some 150 miles. We may distinguish four ethnic groups in this area. From east to west these are—(1) the Hood Peninsula group, including provisionally with these folk Aroma; (2) the Motu group, extending from Kapakapa to Redscar Head; (3) the Pokao group; and (4) the Roro-Mekeo group. Waima and Kevori must be excluded from this group since, though they speak a Roro dialect, there is little doubt that at Waima we enter a zone of contact metamorphism due to the contact with the Papuan stocks of the Gulf. All these groups are characterised by the comparatively high frequency of curly or even wavy hair and the latter may be so little wavy as to appear at first sight almost straight. The skin of all these folk is of a medium brown colour, recalling the various shades of *café-au-lait* and their women are richly tattooed. Socially they represent various conditions which can be traced back with tolerable certainty to a clan system, even in those with the simplest politico-social system—i.e., the Motu and Pokao. Physically the various groups vary considerably, but there is a general tendency to brachycephaly which may be very marked. Among the Pokao, however, a low mesaticephaly tending to dolichocephaly prevails.

The most eastern—i.e., the Hood Peninsula group—appears to tend strongly towards brachycephaly. A number of Bulaa natives measured by Haddon gave an average cephalic index of 82. Bulaa migrated about 30 years ago from Alukune, the fishing village associated with Keapara in Hood Bay. Keapara itself is predominantly brachycephalic, since Haddon found an average cephalic index of 80·7 in the living. Further east Sergi records a skull from Aroma with a cephalic index of 81. I believe that the stature of this Hood Peninsula group is greater than that of the other more easterly groups of this immigrant stock. Although I have seen less of this group than of their eastern kin, I have measured one Keapara man 1821 millimetres (71¾ inches), and have seen another probably at least as tall, while the unusual stature of Keapena, late chief of Aroma, was a matter of common knowledge. Curly and wavy, almost straight hair, is remarkably frequent in this Hood Peninsula group, but I believe does not form so striking a feature as it does among the Pokao.

The villages of the Motu group, though most numerous around Port Moresby, stretch from Kapakapa to Redscar Head. With the Motu should be reckoned the Koita, apparently originally an Eastern Papuan folk who have for generations intermarried with the Motu and whose villages

[2] Le Varietà Umane della Melanesia, R. Accademia Medica di Roma, Anno xviii.

are usually built near to, or even in direct continuity with, those of the Motu. Although the Koita still speak a Papuan language the majority of the males—at any rate, in the eastern moiety of the tribe—speak Motu, a Melanesian language, and have adopted to a greater or less extent certain Motu arts and customs, such as pot-making and the hiri, the annual trading voyage to the Papuan Gulf. Fifteen Motu-Koita, all except one of whom were nominal Motu, gave an average cephalic index of 77·2 (minimum 71, maximum 91). If the average index of only 14 of these be taken—i.e., the unusually high index of 91 be omitted—the figures become 76·2 (minimum 71, maximum 81). The average stature of these 15 folk is 1621 millimetres (about 64 inches), but includes one exceptionally tall man of 1820 millimetres (71¾ inches).

The Pokao, who have apparently been kept from the coast by the Roro-speaking tribes, are remarkable for their high percentage of individuals with curly, wavy, or almost straight hair. Fig. 13 shows a woman with a by no means uncommon type of hair, which would at first sight be called straight but is on careful examination found to be slightly curved and so must be classed as wavy. In section such hair is almost circular, thus contrasting with the elliptical section of typically frizzly Papuasian hair. It is interesting to note that among this folk wavy hair appears to be to some extent a secondary sexual characteristic, since it is far commoner in women than in men. Among the Pokao the brachycephalic element is reduced to a minimum and as already mentioned a low mesaticephalic condition tending to dolichocephaly prevails.

The Roro-speaking and Mekeo-speaking folk of the valley of the St. Joseph River constitute the most western groups of the immigrant stock at present under consideration. These two folk are so much alike socially and culturally that they must be considered together, though when any considerable

FIG. 11.

A Motu man.

number are examined it becomes evident that there are slight but constant physical differences. Thus the Mekeo folk who inhabit the upper portion of the plain of the St. Joseph River behind the coastal Roro-speaking zone are somewhat shorter and distinctly more brachycephalic than the Roro. The latter extend westwards towards Cape Possession, where their outlying villages, Waima and Kevori, speak a different dialect to the other Roro-speaking folk. Further, the inhabitants of Waima (and probably also of Kevori, of which, however, I have no knowledge) can be divided into two types, one showing affinity to the Elema group of the Papuan Gulf, the other resembling the more easterly Roro. Ignoring Waima and Kevori the average cephalic index of 30 Roro-speaking men was 79 and their average stature 1617 millimetres (about 63½ inches), while the average cephalic index of 29 Mekeo men was 83 with an average stature of 1585 millimetres—i.e., about an inch less. Linguistically the language of both Roro and Mekeo belongs to the Melanesian stock spoken by the Motuoid immigrants, but the language of Mekeo presents peculiarities in its phonetic system, such as the frequency of aspirates and gutturals, which perhaps point to Papuan influence.

FIG. 12.

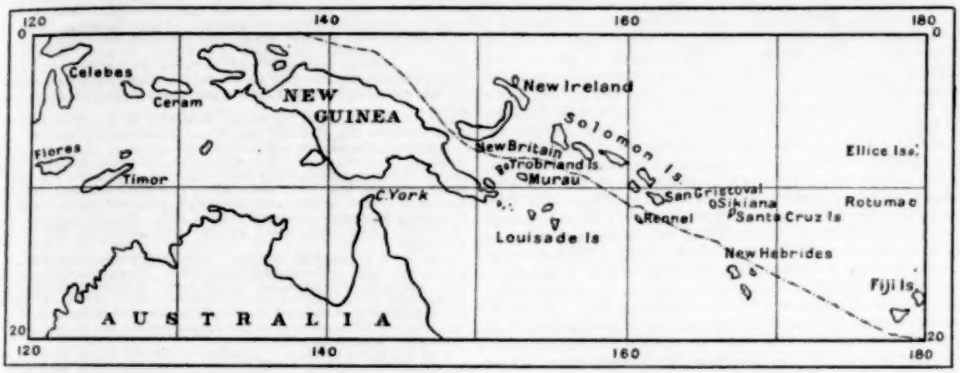
A Pokao woman.

I may now refer to the importance to be attached to cultural evidence, with which I include linguistics, when endeavouring to approximate or separate groups which present notable points of physical resemblance. Briefly, I believe that cultural evidence is of the greatest value where one of the groups to be compared is presumably immigrant or where one or both of these groups can be shown to be mixed or to contain a considerable strain of foreign blood. An actual example will make this clear. There is considerable likeness in general appearance between the Marshall Bennet islanders and the presumably immigrant Motu of Port Moresby. Both are predominantly mesocephalic, both are rather short (about 64 inches), and in both folk a comparatively large number of individuals occur with curly or wavy hair. And the skin of both people presents various shades of *café-au-lait*, while linguistically both talk languages with a Melanesian grammar. Probably were our knowledge of these two peoples physical only they would be grouped together, but on considering their social and cultural characteristics we find no similarity. In arts and crafts the Marshall Bennet islanders agree thoroughly with other groups of the south eastern (Massim) ethnographical district; socially they present the same system of totemism with mother-right found elsewhere in this area and differ only in the real power of their chiefs. The Motu, on the other hand, practise a series of arts and crafts in no way closely related to those of the Marshall Bennet folk, while socially somewhat faint traces of mother-right mark the only resemblance. This absence of cultural and social resemblance is certainly striking enough and may well be considered sufficient evidence by some, but in this particular instance we can go further and hazard a shrewd guess as to the origin of the strain responsible for the occurrence of curly or wavy hair and brachycephalic heads in the Marshall Bennets, the Trobriands, and Murua. It is now generally agreed that the Polynesians originated in lands to the west of their present domain. Further, it is generally believed that their oldest home was in some part of Indonesia. Fig. 13, slightly modified from Mr. Percy Smith, shows what he considers was their route east of the 120 parallel E. latitude towards their present home.[3] Whatever be our views of the track pursued by the Polynesians or the expediency of deriving them from

[3] Hawaiki: The Original Home of the Maori, 1904.

any particular point in Indonesia there can be little doubt that one line of their advance eastwards lay north of New Guinea and included certain outlying islands of the Solomons, such as Rennell, the population of which is Polynesian. Similar Polynesian islands occur in the New Hebrides but with these we are not immediately concerned. Further, Guppy has noted a wavy or straight-haired element in both the Western and Eastern Solomons. It now becomes clear that the curly-haired brachycephalic element in the Marshall Bennets, Trobriands, and Murua is due to Polynesian influence and probably brachycephaly wherever it occurs among the Massim is provisionally best accounted for in this way. It will be seen then that there is no reason closely to relate the Motu and the Marshall Bennet, Trobriand, and Murua stock. Hence it becomes necessary to look beyond New Guinea and it seems as if the Eastern Solomons may provisionally be considered to meet the necessities of the case as postulated above. Guppy's measurements (35 in number) on the living show that the cephalic index varies from 69 to 86, with an average of 76·6 (with a maximum around 75), a figure closely approximated by the average of six skulls collected on Rubiana New Georgia, which have been measured and described by V. Giuffrida-Ruggeri.[5] Of the stature of the Eastern Solomon islanders no exact figures are to hand; those I have seen are not tall; my impression is that they are shorter than say, the Motu and this is borne out by Guppy's figures for the whole Solomon group which give an average height of 1625 millimetres (64 inches). It must, however, be remembered

FIG. 13.



islanders, the cultural and social differences between them being supported by physical evidence—in spite of their general resemblance—when we are in a position to appreciate the former correctly. These Marshall Bennet folk are, in fact, an example of the alteration that a people undergo where two unlike races touch and partially fuse, a condition to which the term "contact metamorphism" borrowed from geology has been most aptly applied by Mr. T. H. Holland of the Indian Geological Survey.[4]

One other group in which contact metamorphism has occurred must be described. Reference has already been made to the fact that the Waima and Kevori sections of the Roro tribes differ in dialect and physically from the other Roro-speaking natives. Physically this difference is expressed by a lowering of the average cephalic index (75 as against 78) with a rise in the facial index (86 as against 82) and an increased stature, so that the Waima folk, as a whole, approximate to the longer-headed, longer-faced taller Gulf type. Some individuals, indeed, would pass as typical Elema men, the rather slight, lightly-built type of Roro native with prominent rather fleshy lips giving place to a taller heavier man with a longer face and a higher bridge to his nose, higher cheek bones, and a flatter more determined-looking mouth.

IMMIGRANT STOCKS.

Reference must once more be made to the immigrant race of the south-eastern coast and an attempt made to determine the direction from which it came. To this end, a people with similar physical traits must, in the first instance, be found and then the possibility of connecting them with the Motuoid stock be considered. The comparatively light colour and often wavy hair of the people of this stock, taken with the fact that they speak a Melanesian language, point to the east as the direction from which they have come, while their predominant mesaticephaly tending to brachycephaly and the character of their hair seem to differentiate them from the Papuo-Melanesians of the south-eastern peninsula. The islanders of the Trobriands, Marshall Bennets, and Murua have been shown to owe these characters to a special cause, while there is no reason, linguistic or other, to lead to the supposition that they gave rise to the Motuoid that this average includes a number of men from the Western Solomons, where the natives are decidedly taller than in the eastern portion of the group. The Rev. Walter Ivens, who has for many years been stationed on San Cristoval, one of the eastern islands, tells me that wavy and curly hair is common, occurring perhaps in 15 per cent. of the population, while the samples of hair brought back by Guppy preserved in the British Museum show that the wavy hair is found in both the Eastern and Western Solomon Islands.[6] These points of resemblance are sufficiently striking but become even more so when the question of language is considered. Mr. Ray tells me that the language spoken on the Hood Peninsula of British New Guinea is extraordinarily like that spoken at Saa on the south-eastern extremity of Malayta and upon the neighbouring island of Ulawa. With the Motu dialect the resemblance, though still present is less obvious. It seems then as if a good *primâ facie* case could be made out for connecting the Motuoid stock with the Eastern Solomons but far more research is necessary before this can become more than a working hypothesis.

With regard to the Massim Papuo Melanesians they must be looked upon as immigrants, and it does not seem profitable in our present condition of ignorance to attempt to fix the part of Melanesia from which they came, but the almost identical traits, physical and cultural, existing throughout almost the whole of the Massim district seem to show that the people belonged originally to a single stock.

In conclusion, my best thanks are due to Major W. Cooke Daniels for allowing me to use freely the measurements taken by Dr. Strong and myself while members of the Daniels ethnographical expedition. I am also indebted to Dr. A. C. Haddon for the loan of a number of slides as well as for permission to quote certain of his results.

[4] Journal of the Anthropological Institute, vol. xxxii., 1902.

[5] Atti della Societa Romana di Antropologia, vol. xii., 1906.

[6] Of 28 samples of hair collected by Guppy and now in the British Museum two from Shortlands Island appeared to me to be wavy, while three from Treasury Island, two from Santa Anna, and three from Ugi, were, I thought, curly.

TORBAY HOSPITAL, TORQUAY.—A very successful bazaar was held recently at Torquay in aid of the funds of the Torbay Hospital, the receipts amounting to £1054.

ORAL SEPSIS.[1]

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IT has now become recognised that a very large proportion of what are known as "diseases" is caused by poisons either introduced from outside, or elaborated within, the body itself. And even in the case of the latter it must be supposed that the cells and organs are induced to depart from normal function by outside influences in the first place. Malnutrition or starvation, of course, and physical injury, will interfere with normal function but otherwise we must look to one or more of the possible poisons or toxins to explain physiological action being exchanged for pathological behaviour, previously to the supervention of what is termed senile decay. To combat many of the adverse conditions acting upon the human organism much has been done by medical specialists in hygiene and sanitation. The study of bacteriology and pathological chemistry is also providing vastly improved methods of treating disease by discovering causes, assisting diagnosis, and providing antidotes. But as the forces arranged against the physician are so many and so varied it becomes advisable to discover and to recognise any possible line of attack and it is with this reason as an excuse, if one be needed, that I venture to ask for the consideration of the cavity of the mouth as a possible source of infection to the rest of the body. Placed at the very entrance to the alimentary canal it is open to direct inspection and manipulation and it requires no complicated instrument with which to make the examination. There is, then, no excuse for overlooking the teeth and gums, and the most convenient time for a systematic observation is, of course, when the time-honoured inspection of the tongue is made The increasing demands made upon the student's time is, I am afraid, one of the reasons for the idea that teeth and gums may be left entirely to the dental surgeon, but the general practitioner should at all events be able to discover anything the matter, and know what it is, even if much of the treatment may be demanded at the dentist's hands, and I hope in the short time at our disposal to submit sufficient to indicate what to look for.

It has been a matter of general observation for many years in the dental departments of hospitals that patients who have their mouths cleared of septic teeth and stumps rapidly improve in health. This takes place before the supplementary artificial dentures are applied and shows that the improvement depends not so much upon the restoration of efficient mastication as upon the removal of the septic teeth. Since Dr. William Hunter in 1900 drew attention to the relation between "oral sepsis" and systemic disease a good deal of attention has been paid to the subject and the discussion in the Section of Dental Surgery at the meeting of the British Medical Association at Oxford did still more to emphasise the importance of the question. Dr. Hunter on that occasion showed an interesting collection of pathological specimens from cases which had come under his notice during the previous four years. These specimens illustrated infective conditions in the teeth, the jaws, and the air sinuses; in the stomach, the intestine, the colon, the appendix, and the rectum; and in the kidney and the heart. But when dealing with toxic effects of oral sepsis, as distinguished from pyogenic infection, Dr. Hunter, in default of specimens in bottles, described his clinical experiences. These constituted most valuable evidence in support of his contentions and other speakers added more. I now venture to submit condensed extracts which Dr. J. A. Ferrière was good enough to make from the notes of some of the cases which I treated whilst the patients were in University College Hospital under the care of physicians to whom I am indebted for permission to refer to them. (For the proper initials of the names I substitute the letters of the alphabet in their order.)

CASE 1.—A. B., a female, aged 58. Married. Admitted under Sir T. Barlow March 27th. Discharged July 4th. On admission, complained of pain and flatulence after food. "Bubbling" sensations in stomach. There was a history of progressive asthenia and increasing dyspepsia for the last 12 months. Tremor, giddiness, and various neurasthenic symptoms for the last two months. Has wasted a good deal during the last two years. Present state: Patient very poorly nourished; face is very pale and worn—mucous membranes very pale. Teeth bad. Stomach dilated. Summary: This patient was admitted with symptoms of gastric disturbance and grave anæmia simulating pernicious anæmia. She was put on arsenic from April 3rd, but no great improvement took place until her teeth were attended to. The only other therapeutic measure from which the patient derived benefit was the faradic battery which relieved her of her flatulence.

CASE 2.—C. D., a male, aged 35. Admitted under Dr. Sidney Martin April 14th. Discharged April 30th. Complained of wasting and weakness. History: Losing a great deal of flesh for last few months. So weak and wasted that Addison's disease and malignant disease had apparently been thought of. Patient had lost all energy and interest in life. Appetite good; no sickness, vomiting, or diarrhœa. Present state: Teeth decayed and very foul. The only other physical signs were a few rales at the left apex and a peculiar click heard only at the end of the act of coughing. The note over right apex was slightly impaired and the vocal resonance somewhat increased. Result: The bad teeth were removed and patient improved very much. Weights: April 17th, 7 stones 10 pounds; April 30th, 8 stones 2 pounds 1 ounce.

CASE 3.—E. F., aged 18, single. Admitted under Dr. Bradford, June 2nd, 1902. Discharged July 13th. Complained of attacks of pain and sickness after food for the last three months. Amenorrhœa two months. No history of hæmatemesis. Is getting worse; pain after food very severe. Present state: The teeth are badly decayed in both jaws, many stumps; the breath is very foul. Result: The attacks of pain and sickness continued and there was no marked improvement until attention was directed to the teeth. Eight teeth were extracted on July 4th and the patient rapidly improved. July 13th, all symptoms gone.

CASE 4.—G. H., aged 35, male. Admitted as a case of pernicious anæmia under Dr. Roberts, May 11th. Discharged June 15th, 1904. Complained of weakness, palpitation, and shortness of breath; pain in stomach after exertion. Present state: Patient markedly anæmic, yellow tinged complexion and skin. Œdema of legs and over sacrum. Heart enlarged, presystolic and systolic murmurs at apex. Teeth bad. May 26th: Two teeth, one abscessed, removed from lower jaw. June 8th: 12 stumps extracted. June 16th: Patient went out much improved. July 14th: Said he had been perfectly well since his discharge.

CASE 5.—I. J., aged 24, female. Admitted under the late Dr. G. V. Poore, April 2nd. Discharged April 16th. Complained of pain after food; difficulty of swallowing; loss of flesh. Present state: Patient in a condition of very pronounced emaciation; teeth very bad. The pain and difficulty of swallowing are due to imperfect mastication. Result: After the teeth had been attended to the patient improved and gained 4 pounds. Symptoms relieved.

CASE 6.—K. L., a female. Admitted under Dr. Poore, July 1st, 1900; discharged August 3rd. Complained of vomiting after food, pain and tenderness in abdomen. History: she vomited some brown material six months ago and motions have occasionally been black. Present state: The teeth are in a very bad condition. Patient at first refused to remove an upper denture which had been in the mouth many months. Several loose teeth were extracted on July 29th. On the 31st the mouth and general condition were much improved and the patient was discharged much relieved.

CASE 7.—M. N., aged 27. Female. Admitted under Sir T. Barlow, May 10th, 1904. Discharged May 28th. Complained of pain over heart and in left side. Headache. Cough and spitting of blood; has also vomited blood. Lost weight during last two months. Present state: The patient is a pale and anæmic woman. "The first thing noticeable about her is the almost unbearable odour from her mouth." An artificial denture covers the stumps of the upper teeth. The lower incisors are loose and extremely foul pus is welling up around the teeth of the lower jaw which are covered with tartar. Appetite poor. Patient has to be forced to feed. No other findings on physical examination. Upper stumps removed, lower teeth scaled and treated with H_2O_2 on May 13th. Patient almost well on May 28th.

It is not only the physicians who pay attention now to the existence of a septic mouth. The surgeons who undertake abdominal operations prefer, if time permits, to have the mouth put into good order first. One case which I was fortunate enough to see has been recorded with others by Mr. R. J. Godlee in the Transactions of the Royal Medical and Chirurgical Society. A young woman was sent to him with the object of having a portion of rib resected to drain a supposed abscess of the lung which an exploratory puncture had failed to reach. The patient was in a low, miserable state of health. Mr. Godlee failed to find the physical signs justifying an opening of the chest, but discovered on examining the expectoration that the cast off epithelial cells had come from the mouth and not from the respiratory tract. Further examination then revealed infected pockets between all the teeth. The expectoration occurred chiefly at night and it seemed probable that during sleep a discharge collected at the back of the mouth in sufficient quantity to cause the patient to "cough" it up. The gums bled readily and by means of an unconscious "sucking" the patient aspirated sufficient to tinge the discharge. The teeth were carefully scaled and syringed with peroxide of hydrogen for ten days, after which the expectoration almost stopped and was quite free from blood. It lost its offensive smell and the patient was better in every way. Her sister told me not long ago that she was in good health but was obliged from time to time to resume the syringing.

There appears, then, reason to think that a mouth with broken-down teeth and septic pulp chambers may be the place in which infective material may be cultivated and that, whereas in a healthy mouth pathogenic organisms may meet

[1] A clinical lecture delivered at University College Hospital on Jan. 24th, 1906.

with a peaceful end, in the diseased mouth propagation is provided for and a larger dose is prepared for entrance to the body by the lungs, the stomach, or the lymphatics. Then a "vicious circle" may become established; oral sepsis leading to systemic disturbance will tend to lower the resistance locally and to encourage the continuance of infection and absorption. There seem to be two dangers which may arise in connexion with a septic mouth—first, infection, sometimes by direct extension, as in angina Ludovici; and, secondly, systemic poisoning by absorption and auto-intoxication.

A septic condition of the mouth may be due to any of the following causes. 1. Neglect to clean the teeth and to remove food débris and cultures of micro-organisms. This collection may be favoured by irregular position of the teeth themselves, preventing proper mastication and leading to the production of angles and recesses which it is difficult to keep clean. Artificial crowns, dentures, and "bridges," unless well attended to, favour accumulation. 2. Cavities in teeth caused by dental caries constitute receptacles for decomposing food and organisms. When the tooth pulp is finally exposed and dies a fresh element is added to keep up the supply of undesirable material. A decomposing pulp may provide ptomaines, and when some of the peculiarly ill-smelling and irritable substance is forced through the apex of the root it cannot be a matter of surprise that an abscess is the result. 3. Alveolar abscess. As long as any of the decomposing pulp is allowed to remain the discharge of pus into the mouth is kept up unless the fistulous opening occurs upon the face. A "gum-boil" may close up temporarily but is practically never cured without treatment. It may shut off the rest of the body by its granulation tissue but fistulous openings may occur in various directions. 4. The difficult eruption of a lower wisdom tooth may result in a very septic condition due to ulceration and infection of the gum, pus eventually burrowing into the cheek, under the jaw, or down the neck. 5. Deposition of tartar from the saliva, in addition to favouring the retention of organisms and food particles, separates the gum margin from the necks of the teeth. The irritation and congestion of gum increase as the tartar accumulates and the separation results in the formation of a "pocket" which is finally enlarged at the expense of the periodontal membrane lining the tooth socket. When the pocket becomes infected and pus escapes one form of the so-called "pyorrhœa alveolaris" is established. 6. It is quite clear that such chronic periodontitis must render the mouth septic and when at a later stage the bone of the socket becomes affected the danger is increased and the pyorrhœa is less amenable to treatment short of extraction. Another form of pyorrhœa is recognised, having apparently a systemic origin. Certain constitutional states are thought to cause the deposit of another variety of tartar, in this instance not from the saliva but from the blood. This deposition occurs deep down in the socket and consists of what is called "serumal" tartar. It also results in periodontitis, osteitis, pyorrhœa, and loosening and loss of the tooth. The condition is found in cases of gout, rheumatism, diabetes, syphilis, and other constitutional states. I must not stay too long to discuss the various explanations which have been offered to account for the way in which this form of pyorrhœa originates. But we may remember that the periodontal membrane is at the periphery of the circulation and subject as such to the deposition of uric acid and other salts. It has been suggested that the result may be obtained when blood plasma, holding by its carbonic acid a certain quantity of lime salts lightly in solution, is extravasated in an inflamed region. The carbon dioxide is disengaged and the earthy phosphates are liberated. Chronic suppurative periodontitis is generally only found in persons at or above middle age and arterio-sclerosis has also been suggested as a possible factor. It may occur in younger people and in some such cases there is a specific history. In these the gums and periodontal membrane may have had their resistance reduced by mercury. In many persons approaching middle age with fairly healthy mouths there may be noticed recession of gum and wasting of the alveoli without pyorrhœa.

With regard to the infection of the "pockets" it does not appear possible to charge any particular organism with the invasion. Goadby, who has done a great deal to investigate the matter, has found both cocci and bacilli. The staphylococci are common and are able to produce extremely chronic forms of suppuration, as well as remaining quiescent for considerable periods, only resuming their activity at long intervals. Goadby has also pointed out in this connexion what a marked influence a small local suppurative area effects upon the blood. Given, then, a septic mouth with broken-down teeth containing putrid pulps or with chronic suppurative periodontitis it seems that we have the necessary elements for what Sir Victor Horsley has described as a katalytic mycosis. The patient swallows quantities of putrid stuff which is absorbed by the lymphatics of the stomach and intestines and a chronic sapræmia results.

Treatment.—It is probably impossible to obtain a sterile mouth even if that were desirable, but in view of what happens in neglected mouths an ideal form of preventive medicine will consist in securing an avoidance of accumulations of organisms and food débris. Thorough mastication will assist in this but is probably not carried out by the majority of people. Our ancient forefathers, who left the well-ground-down teeth we find in such skulls as come to light, were not in a hurry to get to school or to catch trains. The food was hard and tough and the necessary mastication resulted in a large flow of saliva, not only beneficial for gastric digestion but for the teeth, which were bathed in this alkaline mouth wash. All carious and tender teeth should be made effective or removed. The removal of tartar by instruments, such as I now show you, will do much to protect the gum margins from the injury already alluded to. A regular and systematic use of a moderately stiff tooth-brush must still be regarded as one of the most important things. The brush should at least be used after the last meal of the day, for it is probable that most of the decomposing and fermentative action will go on during the night when accumulations are undisturbed. The question as to the necessity of tooth powders and mouth washes does not appear so urgent as the proper use of the brush. This should be applied with a vertical rotatory movement rather than in a horizontal direction in order to sweep the interstices between teeth instead of merely passing over convex surfaces. In cleansing the mouth with antiseptic mouth washes it is possible that some protective micro-organisms may be slain. Thus it is generally considered that lactic acid is one of the principal factors in the decalcification of dental caries. But according to Metchnikoff, "lactic acid microbes produce large quantities of acid and so hinder the multiplication of the organisms of putrefaction. Putrefaction takes place rapidly in spite of the presence of the lactic acid microbes, if there be added soda to macerations of meat or milk." But in spite of the views of some who now condemn antiseptic mouth washes the difficulty experienced in keeping the mouth clean seems to warrant their occasional use in helping to get rid of all decomposing matters and in preventing acidity in the mouth. In the treatment of pyorrhœa much importance is attached to the careful and thorough removal of all calcareous deposits and then an attempt should be made to disinfect the "pockets." Many drugs have been employed for this purpose but a very useful application with which at all events to commence is the peroxide of hydrogen introduced with a small syringe. In some cases where the gums are very redundant it may be wise to abolish the pocket by removing the loosened gum with the electric cautery, as practised by Goadby. He, too, has recently treated patients by injecting vaccines prepared from the micro-organisms found in the particular case. These produce an increase in the opsonic power and an amelioration of the general and local symptoms results. It must always be remembered that upon extraction of the affected tooth or teeth an absolute cure results. Many cases call for a well-balanced judgment to decide whether the danger to the patient due to possible recurrence or from a feeble response to treatment does not warrant the removal of teeth. Instances are not uncommon where death results from septic teeth. Occasionally a charge is brought against an operator where a patient has died from pyæmia after an extraction, but the infection has been probably due to a septic mouth rather than to dirty instruments. Pyorrhœa is thought to be far more common than formerly and in this connexion a word of warning may be based upon the views held by some who have considered the matter. There appears reason to think that the infection may be communicated by domestic animals. It is well known that they suffer from pyorrhœa and the lovers of dogs and cats would do well to examine their pets' mouths before allowing themselves to demonstrate their affection in too intimate a manner.

PLUMBISM FROM THE INGESTION OF DIACHYLON AS AN ABORTIFACIENT.

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OBSERVATIONS BY DR. HALL.

DURING the last few years outbreaks of lead poisoning of varying extent and severity have occurred in different localities which could not be traced to the ordinary sources of plumbism, such as water contamination or dangerous occupation. The cases were always limited to women of child-bearing age and eventually the source of the poisoning was traced to the custom of taking diachylon as an abortifacient. In a paper read before the Yorkshire branch of the British Medical Association at Bradford in January, 1904,[1] I recorded 30 cases of this kind and referred in detail to the numerous articles which have appeared in various journals from time to time on this subject (*vide* bibliography at end of paper). This custom of taking diachylon, instead of diminishing, has spread over such a large area of country and assumed such serious proportions that steps must be taken to check or, if possible, to stop it altogether. How this may best be done remains to be settled but it is not so simple a matter as might at first sight appear. The subject is a somewhat delicate one which cannot easily be ventilated in the public press or by the circulation of warning notices. Moreover, there is the fear that publication might tend to spread the evil, instead of reducing it.

History and extent of spread.—The first cases were observed at Leicester and were reported in 1893 by Dr. F. M. Pope. After that the practice seems to have been less prevalent for a while, or at least to have spread but very slowly, for I can find no further record of cases until 1898, that is, five years later, when cases were reported in the neighbouring city of Birmingham. In 1899 it had reached Nottingham in considerable vigour where it has remained ever since. At that time it had certainly not reached as far north as Sheffield, nor did it do so to any extent until some two or three years later, since when the number of cases has steadily increased in the locality. Inquiries which I have made from all the neighbouring centres show that it has reached various smaller or larger towns still further north, such as Barnsley and Doncaster, and that a few cases have occurred in Leeds, including one death, but this seems to be its northern limit. So far as I can ascertain it has not been recorded in any of the other large Yorkshire towns, Bradford, Halifax, Huddersfield, Hull, York, &c.[2] It has not affected the Manchester or Liverpool districts. Further north at Newcastle-on-Tyne it appears to be quite unknown. To the east of this affected Midland area I cannot hear of any cases at Lincoln, Gainsborough, or Retford. To the south of Leicester a certain number of cases, with one death, have been reported to me by the courtesy of Dr. Horace Savory of Bedford. Inquiries from various hospital authorities in London point to its not occurring there. The area over which the practice of using diachylon as an abortifacient has spread is thus bounded on the north by the upper part of South Yorkshire, on the south by Bedfordshire, and on each side by the width of the counties of Leicester, Warwickshire, Notts, and East Derbyshire. This area comprises a large number of manufacturing towns, each containing thousands of the working classes, together with a country between largely occupied by mining populations.

Local statistics as to prevalence of the custom.—Dr. Ransom has attempted to obtain some details as to the extent of this custom in and around Nottingham—that is, in the southern half of the area; whilst I have attempted to do the same in and around Sheffield. A circular suggested by Dr. Ransom has been forwarded to every medical man within an area of some 20 or 30 miles of Sheffield, asking for information. About 200 have replied. Of these 50 have had such cases of plumbism under their care during the last two years (*vide* Appendix A). From their replies one can account for one or two hundred cases in this district during the last two years. One may add to these the large number of women who come to our hospitals suffering from plumbism every month and even then get a very modest estimate of the extent of the practice. And this for two reasons: In the first place a considerable number of medical men have told me that they have had such cases but have not answered my circular for fear of making a breach of professional secrecy, whilst the fear of being found out prevents a large number of sufferers from going to their medical men at all. I believe we shall not be far wrong in saying that several hundred women have taken diachylon in this district alone during the last two years. From the previous statement one is warranted in saying that this abuse of diachylon is a grave public scandal; for, apart from the social and moral questions connected with it, there is the added evil of the harmful effects of the drug itself. Unfortunately this is not limited to the severe abdominal pains and headache which immediately follow its use—themselves a cause of sufficiently serious suffering—but there is the prolonged anæmia, with complete inability to carry on the duties of a household for many weeks or months after the drug has been stopped. Nor is this the end of the story. Many deaths have been recorded—deaths of young, healthy mothers of families (*vide* Appendix B)—to say nothing of cases of lead insanity necessitating removal to asylums and a permanent stigma on the patient.

I do not propose in this article to go into any clinical details of these cases. Lead taken in this form on the whole acts similarly to lead taken in other forms, but one or two points may be referred to in which there is a slight discrepancy. Very often the pills are compounded with aloes so that there is no constipation; at other times the diachylon is taken in such large amounts that acute abdominal symptoms are present, simulating peritonitis or other acute abdominal diseases.[3] When one considers the amount of money and labour expended by local authorities in preventing lead poisoning from the drinking water, or the strict legal regulations which must be observed in all trades where the possibility of lead poisoning may arise, it seems the more necessary to try to put an end to this scourge, which I have no hesitation to say is doing as much, if not more, damage in the places it has reached as either of the two above-mentioned causes has ever done in a similar time.

How the custom is spread.—In order to ascertain the best method of doing this it is necessary to understand how this use of diachylon has come about, and I think that a study of its origin and spread points clearly to certain important indications for its possible prevention. The fact that, starting at or about Leicester, it has taken 12 years to spread over an area of only comparatively small dimensions—namely, three or four counties and that those counties are all adjacent to one another—suggests that it has been handed from person to person rather than by any wholesale advertisement of any particular drug in journals having a wide circulation. Even supposing that a few quack medicine dealers have spread it, their operations must have been restricted to a comparatively small area in consequence of their limited capital and enterprise. Whilst certain of the largely advertised patent remedies sold as "female pills" undoubtedly contain lead as one ingredient amongst others, no large proportion of the prevailing cases arises from their use; nor do I think that most of the "female irregularity cures" contain lead at all. At this point it is desirable to ask the question, "What is it that is being spread?"

For my part, I believe it is *not* any particular pill or medicine, either advertised or not, but rather the secret information that diachylon is a safe and sure abortifacient.[4] This news is handed on from woman to woman by word of mouth, like any of the other "household remedies" or "cures" which every woman knows. It is true that here and there some more enterprising and less scrupulous person acquiring this information purchases the necessary quantities of diachylon and aloes and manufactures pills,

[1] Brit. Med. Jour., March 18th, 1904.

[2] Since writing the above I am informed that the practice is not unknown to druggists in some of these towns, and that even in Dundee druggists have recently been asked for diachylon, apparently for this purpose. From a letter appearing in the Brit. Med. Jour., Feb. 3rd, 1906, it would appear that some Lancashire districts have become affected.

[3] Jaundice has been noted in several recent cases.

[4] An important addendum should be made to this—namely, that diachylon is also represented to be a preventive against *becoming impregnated*. Much is taken with this idea.

with which an extensive trade is done in their neighbourhood under the name of "Nurse Somebody's Pills." They may even go so far as to peddle the pills in the country districts around but they are too poor and too frightened to advertise their products in the public press except on a very limited scale. Apart, however, from these local exacerbations the general steady advance of this "knowledge of evil" is, as I said before, from woman to woman. Hence its slow progress, for the women of this class do not travel farther than to and from their nearest market town or centre. The direction of spread along the northern path of thickly populated manufacturing populations, subject to bad trade or overcrowding, rather than to the east or west, or south, where the country is more sparsely inhabited, can be readily understood. The absence of cases in London helps to support the opinion I have expressed, for it would seem obvious that were any of those dealing in this traffic in a monetary position to push their trade further afield London is the natural place to which they would turn. I have gone into this subject of the spread of the evil in some detail because it is essential that it should be understood in order to cope with it successfully.

How to deal with the evil.—We may now consider the various practical suggestions which have been made as to the best method of dealing with the matter. 1. To compel by Act of Parliament the publication of its ingredients on the cover of every patent remedy. 2. To prosecute and to punish the makers and vendors of diachylon pills. 3. To seek the support of the lay press and invite them to abstain from publishing advertisements of "Female Irregularity" remedies. 4. To circularise or otherwise inform all medical practitioners in the country of the possibility of such a cause in obscure cases of plumbism, so that they may recognise it and warn their patients. 5. Compulsory notification of all cases of abortion. 6. To make lead poisoning in women a notifiable disease. 7. To control or to prohibit the sale of diachylon. There are two ways in which this method might be carried out: (1) the sale of diachylon might be prohibited entirely; and (2) it might be scheduled under the Poisons Act.

A very ingenious suggestion was made in reply to my circular by Mr. A. Chawner of Clay Cross—namely, that it should be made compulsory for all diachylon to be adulterated with some harmless emetic substance, such as ipecacuanha, so that it would be impossible to take it. In conclusion, I would like to express once again my sincere thanks to all those who, either in reply to my inquiries or of their own initiative, have so greatly assisted me in this matter, and to remind those of my professional brethren whose districts have not yet been affected of the importance of preventing them from becoming so.

Appendix A.

Extracts from replies by medical men in the Sheffield district to Question 1 of Circular—namely, "Do you find it common and can you say how many cases you have seen in 1904 and 1905?" (N.B.—I have selected them largely to show the extent of area affected.) Rawmarsh: "I believe it is very common. Cannot say how many cases I have seen; suspected about six; one absolutely certain." Parkgate: "Three cases last year and five during the last three months." Masborough: "About six or seven; one fatal case last year." Rotherham: "I have seen several cases of lead poisoning in women, which I was unable to account for until recently." Rotherham: "I have had at least half a dozen cases during the last two years and now always examine the gums when called to a miscarriage." Mexborough: "It is comparatively common. I have seen at least six cases" Mexborough: "Five cases." Doncaster: "Increasing; about a dozen cases. A chemist who set up in a small way about six months ago states he must have sold 100 penny lumps of diachylon." Attercliffe, Sheffield: "Fairly common in this district; I have seen about a dozen cases." Bolsover, near Chesterfield: "I have seen half a dozen cases in 1904–05." Bolsover, near Chesterfield: "I have had seven cases during the last two years." Barnsley: "We have come across two cases of probable miscarriage this last year in which there was a very marked blue line. Of course inquiries failed to find out that 'pills,' &c., had been taken." Wincobank, Sheffield: "Very common. Had about six to twelve cases." Sheffield: "Have had four cases in last year and patients have told me it is very common." Sheffield: "About 30 cases." Hoyland Common: "Four cases in the last two years—one a bad case, the others of variable degrees of severity." Bakewell: "Two cases this year." Belper: "Yes, near 20." Swinton: "About six."

Appendix B.

List of deaths from plumbism during 1904–05–06 occurring in the Sheffield district or reported from other places. (N.B.—This does not include those occurring in the Nottingham area referred to by Dr. Ransom.) *Locality.*—1. Masborough, Rotherham: "Woman. No inquest." 2. Rawmarsh, Rotherham: "Mrs. G., aged 34 years. November, 1904. Source of pills unknown. No inquest." 3. Bedford: "Woman, 1904 or 1905 (reported by Dr. Savory). Inquest. The person who sold the pills was known but no punishment followed." 4. Sheffield: "Mrs. A., aged 25 years. June, 1905. Inquest. Unable to trace the source of supply." 5. Leeds: "Mrs. B, aged 23 years. Inquest, March 23rd, 1905. Pills made by a Mrs. Oxley and indirectly purchased by deceased. The jury found 'that death was due to lead poisoning, but that there was no culpability on the part of Mrs. Oxley.'" 6. Sheffield: "Mrs. H., aged 32. Inquest, Jan. 16th, 1906. She was brought to the Royal Infirmary from a country district outside and absolutely denied having taken anything. The jury found a verdict of 'Death from lead poisoning, source unknown.' Since then I have heard that a box of 'Nurse O——'s' female corrective pills, which are the chief offenders in this district, and contain diachylon, was found in the deceased's house."

ADDENDUM BY DR. RANSOM.

In order to collect further information on this subject I sent out 200 copies of the following questions to medical men living within 20 miles of Nottingham. 1. Do you find it common and can you say how many cases you have seen in 1904 and 1905? 2. Is it an efficient abortifacient? 3. What symptoms does the poison usually produce? 4. Have you known of any fatal cases; if so, how many? 5. Is the lead usually bought as diachylon or as secret "female pills"? 6. Can you suggest any means of preventing the practice?

While a considerable number of medical practitioners, especially those engaged in rural or in better class practice, were not familiar with this use of lead, 60 replies were received which showed it to be widespread and common. Thus Dr. F. R. Cassidi of Derby had seen 100 cases between 1896 and 1905, and some Nottingham medical men practising in the poorer districts sent the following replies:—Dr. C.: "About 20 in each year." Dr. S.: "Six in the last nine months." Dr. F.: "18 in the last three years." Dr. T.: "About nine a year." Dr. N.: "15 in 1904 and 1905." Dr. W. S.: "33 in 1904 and 1905" Dr. J. W. Scott, formerly house physician at the General Hospital, Nottingham, reported 30 cases as in-patients or out-patients there in 1903 and 1904, and Dr. Edward, the present house physician, reports 22 cases between January, 1904, and October, 1905. It appears to be common in the colliery towns and villages of the Leen and Erewash valleys and round Mansfield. It is well known in Newark and Loughborough, but does not seem to have reached Melton Mowbray.

In reply to Question 2, most replies indicate that it usually does produce abortion, although some are emphatic about its uncertainty, and all are clear as to its damaging effects to health and serious risk to life. The symptoms described fall into three groups: 1. Those of acute lead poisoning, such as colic, vomiting, or encephalopathy. 2. Those attending abortion, such as metrorrhagia and metritis. 3. Those of chronic lead poisoning, such as anæmia, headache, and occasionally wrist-drop. Insanity and blindness from optic atrophy have been enduring after-effects. In ten cases it is said to have caused death, while many others were dangerously ill and barely escaped with life.

In regard to the form in which lead is taken it appears to be usually bought by the patient or by a friend (for example, a midwife) as diachylon in the lump, and made into pills, either alone or mixed with colocynth, aloes, and such drugs. In the latter case the "lead colic" may be accompanied by diarrhœa instead of constipation. But there is also no doubt that a large number of "female pills" sold by herbalists and quack medicine vendors contain lead. Some are specially labelled "not to be taken by pregnant women."

As to the means of preventing the practice no very satisfactory replies were received. One very general suggestion was to schedule diachylon and other preparations of lead as poisons, another that diachylon should only be sold

spread as plaster, a third that frequent analyses of "secret female pills" should be made and their vendors prosecuted, a fourth that druggists should be warned as to the use being made of diachylon and the danger of selling it indiscriminately, and a fifth that lead poisoning in women should be a notifiable disease. In regard to these suggestions, it may be remarked that even if the pharmacopœial preparations of lead were scheduled as poisons persons who knew its properties could still buy it in other forms, such as white lead. Nevertheless I am of opinion that a considerable diminution in this practice would follow the scheduling of diachylon as a poison and that the evil is of sufficient magnitude to justify this step, unless, indeed, its sale were stopped altogether. The chief use of lead plaster in this district is to "sweal the milk out of the breasts." It can hardly be maintained that lead plaster is necessary for this or any other purpose. The scheduling or suppressing of diachylon need not involve the publishing to the public of the reasons that led thereto.

I brought the matter before the Nottingham and Notts Pharmaceutical Association and found that many of the leading druggists were quite unaware of the use to which diachylon sold in the lump was put. The council at once gave its kind consideration to the matter and issued a circular to the members recommending that diachylon should be labelled as a poison, "for external use only." I am told that within a fortnight the sale of the preparation had diminished. The question of the prosecution of vendors of "female pills" is one for careful consideration from the legal point of view, but I am decidedly of opinion that lead poisoning in women should be made a notifiable disease.

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RECURRENT HERPES GESTATIONIS.

BY C. A. DOUGLAS BRYAN, M.R.C.S. ENG., L.R.C.P. LOND.

THE notes of the following case are interesting in that they describe a rare disease.

The patient, a woman, aged 36 years, came to consult me on Sept. 1st, 1903, for a rash on her arms. I found there an eruption consisting of erythema, papules, and vesicles of about the size of small peas; it was irritating and painful and was for the most part limited to the forearms, though there were a few patches without vesication on the thighs and body. The rash had been in evidence for about a fortnight. The patient was at this time about five months pregnant and fœtal movements were present. Her general health was good and the urine was normal. The diagnosis of herpes gestationis was made.

Previous history.—The patient had had five previous pregnancies. The first four confinements were instrumental cases but the reason for this I cannot explain, as I did not then attend her. There was no evidence of pelvic contraction. The first child was stillborn, the other three are living. The fifth pregnancy, in May, 1901, ended in a miscarriage at the second month. The patient was very ill at the time, having lost an excessive quantity of blood before I was summoned, but she made a good recovery. Her catamenia have always been normal and regular. There is no history of syphilis. Her general health has been of quite an ordinary character, except that after each confinement she has been troubled with facial neuralgia lasting for several weeks. No other members of her family have been troubled with a like eruption.

Course and symptoms.—The rash gradually extended over the rest of the body, leaving only the palms and the soles free, though the face was only affected by one or two spots. When the pain and irritation were most severe the forearms became hot and swollen and the vesicles were continually bursting, the fluid from them giving a sensation of scalding to the arms, whilst fresh crops rapidly appeared. These symptoms produced a good deal of insomnia.

Treatment.—In the first place arsenic was given internally and lead ointment applied externally, but no relief was experienced. Later various other remedies were tried, such as resinol and thiol, but they gave no result.

After six weeks of the disease the fœtal movements diminished and ceased altogether about Sept. 29th, 1903, when the death of the fœtus was diagnosed. The rash gradually disappeared and the pain and irritation subsided. The patient was delivered on Oct. 9th of a stillborn fœtus (breech presentation). The confinement was easy and the patient made satisfactory progress until the eighth day of the puerperium, when she developed a pulmonary embolism with the consequent pleuritic effusion from which she slowly recovered. The catamenia reappeared in January, 1904, and were regular every month, but a week before the flow commenced the patient experienced pain and irritation in the forearms; these became slightly swollen and red spots appeared on them. The spots and the pain subsided as soon as the flow ceased. In the following April the spots did not appear and the patient regained her usual health, which was only interfered with by a severe attack of facial neuralgia in June, which lasted about a month.

Second attack.—The patient became pregnant for the seventh time in September, 1904, and towards the end of October she was troubled with severe pain in the legs. There was nothing abnormal to be seen but the tibiæ were painful on percussion. This lasted for about a fortnight, was not amenable to treatment, and disappeared on the appearance of the eruption at the beginning of November. The rash again commenced on the forearms, these being most affected, and it gradually spread over the rest of the body, leaving only the palms and the soles free. In appearance the rash consisted of erythematous raised patches and papules, reddish in colour, serpiginous and circinate. This was best seen on the body. The forearms did not have this distinctive marking, being completely covered by the eruption, and on parts of them were small semi-solid vesicles; these would occasionally burst and fresh ones appear. The rash was extremely irritating and there was pain of a boring character felt deep in the arms constantly present, but worse in the evening and night, when the forearms became swollen, red, and hot. The eruption was always at its worst when the patient should have had her usual monthly period, remaining at its height for about a week and then gradually subsiding but never disappearing.

Treatment.—This time evaporating and astringent lotions were tried but without success, though I think that vesication was to a certain extent prevented. Internally, potassium iodide (10 grains) and liquor hydrargyri perchloridi (30 minims) were administered but gave no result. During the latter six weeks of the pregnancy a draught of chloral hydras (30 grains) and liquor morphinæ hydrochloridi (30 minims) was given at times, and nightly during the last fortnight, but this at the most only produced about three hours' sleep; other hypnotics signally failed. As the pain and consequent insomnia were telling on the patient's constitution premature labour was induced at the beginning of March, 1905, by means of bougies, the patient being delivered of a six months fœtus which lived a week. The placenta was normal except for a yellow necrotic-looking patch about three inches in diameter situated near its margin. The patient passed a normal puerperium, the rash gradually disappearing. Her general health has remained quite satisfactory but the rash has not completely disappeared, there being still a few spots and some discolouration of those parts where the rash was most in evidence.

Comments.—The first fact that may be noted about this disease is its rarity; in most of the books at my disposal it is certainly mentioned and that is about all. In Clifford Allbutt's "System of Medicine" the best description that I can find is given, but here the writer is only speaking of a very limited number of cases that have come under his personal observation and the reports of a few others. I have only seen one other case but that did not conform to the above type, consisting only of large bullæ on the forearms with some pain and irritation.

Causation.—Pregnancy without doubt is the all-important factor. If pregnancy gives only a predisposition to the disease, then there must perforce be an exciting cause. To make any suggestion as to this is exceedingly difficult unless the condition is looked upon as being of simple nerve origin and that when the nervous system becomes unstable, as in pregnancy, some obscure morbid process takes place, giving rise to the disease. But if this was the case

then in other conditions of the nervous system we should expect to find a like eruption, but it is not so, therefore I think that pregnancy must be taken as the exciting cause. It will then naturally be asked, "How does it act?" It is a recognised fact that during pregnancy toxins are frequently developed and I consider that some peculiar toxin is generated which acts upon the nervous system giving rise to the disease. This toxin, I think, is probably developed by some morbid change taking place in the ovaries during pregnancy, as instanced by the aggravation of the disease at the monthly epochs and also by its continuance for a short while after the cessation of pregnancy.

Distribution.—As will be noticed, it was excessively wide; this fact alone points to the circulation of a toxin.

Treatment.—To my mind the only rational treatment is the induction of premature labour as soon as the patient's health is beginning to be affected by the insomnia, &c., caused through pain and irritation. It is useless to delay when there is no prospect of giving relief by other means and the longer this mode of treatment is put off the weaker will be the patient and so less able to endure the consequent labour. As will be seen, various local and internal remedies were given a fair trial but without success, the treatment being mainly symptomatic and empirical, and it must be so until we arrive at a more definite causation of the disease.

Leicester.

ACUTE HÆMORRHAGE INTO A GALL-BLADDER THE SEAT OF INFECTIVE CHOLECYSTITIS AND HUNDREDS OF GALL-STONES.

BY J. A. W. PEREIRA, M.D. BRUX.,
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AND
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HÆMORRHAGE into the gall-bladder as an acute symptom seems to be such a rare condition that the following history may be worth recording.

On the evening of July 30th, 1905, I (J. A. W. P.) received a message desiring me to send a bottle of medicine to relieve "spasms" occurring in an old patient of mine. I sent her a carminative mixture, but in half an hour a second message came urging me to come to see her quickly as she was worse. On arrival I found her seated on a chair in the kitchen, supported by two friends. Her face was blanched and she complained of thirst. She groaned with pain which she described as being round the navel. She rambled in her speech and did not recognise either her friends or me. I had her carried upstairs and placed in bed so that I might examine her more closely. The abdominal walls were soft and supple. There were pain on deep pressure and fulness in the region of the appendix. There was distinct tenderness at MacBurney's point. There was also pain on pressure at the right hypochondrium. The liver was not enlarged and the gall-bladder could not be felt. There was no jaundice. The rectum was empty and the vagina was normal. She had menstruated three weeks previously. She was regular. The temperature was normal and the pulse was 100. Ten grains of Dover's powder and a soap-and-water enema were given. I made out also her previous history to this extent, that she had for years suffered from spasms which were usually relieved by getting rid of flatulence from the stomach. On the night mentioned she thought that she had one of her old attacks; thinking that perhaps a good walk would do her good, she dressed and went out. Whilst out she felt that she must open her corsets, feeling so distended, and she had great difficulty in getting home. This feeling rapidly gave way to one of actual pain and collapse. She reached home, however, and was found lying on the floor.

On the following morning I saw the patient at 8 o'clock. She had passed a restless night but the pain was not so violent. She complained of thirst. At 11.30 the pain was worse. The temperature was 99° F. and the pulse was 105. A saline aperient was given. This acted about 8 o'clock. The abdomen was then slightly distended on the right side. Later in the evening I called in one of the surgeons of the hospital to see the case with me. On examining the patient Dr. Harris found a roundish tensile swelling in the right hypogastrium which was exceedingly tender to the touch. Its lower border could be traced to the ligament and anterior-superior spine of the ilium and backwards to the crest; its upper border could not be made out so distinctly. The respirations being shallow no vertical movement could be detected. As the acuteness of the attack was out of proportion with the temperature it was decided to wait still a little time and to see her together the next morning. As a ruptured tube gestation could not be dismissed as an alternative diagnosis it was ascertained that she had been regular every three weeks but had not had any coloured discharge between the times. She had felt poorly for the last few weeks. If asked where the worst pain was she placed her hand over the hypogastrium. On seeing her the next day together we decided that as the pain and other symptoms had increased an operation was called for and this was done on August 1st at the Royal Devon and Exeter Hospital. Whilst under the anæsthetic it was observed that the lump seemed higher up than it appeared before and although the case seemed to be one of appendicitis it was recognised that a misplaced kidney or renal tumour might be the cause of such symptoms. On cutting down over the most prominent portion of the tumour, about midway between the ribs and Poupart's ligament, in the line of the external border of the right rectus, a tumour presented itself which proved to be the gall-bladder greatly thickened and tightly distended. This was tapped and four ounces of bile-stained but bloody fluid were evacuated. The gall-bladder was now stitched to the abdominal walls and the remainder of the wound was closed. Three days later under an anæsthetic the gall-bladder was opened and found to be filled with a thick, glairy, raspberry-jam-coloured mucus, with almost innumerable gall-stones, some as large as Spanish nuts, some of the size of orange pips, and some still smaller. Between 200 and 300 were removed and many extruded in the dressings subsequently. A large drainage-tube was kept in for eight days when it was removed, the wound subsequently healing with no untoward symptom. The raspberry-jam-coloured contents were not clotted or offensive.

In the light of what was found at the operation it seems difficult not to think that the initial feeling of poorliness was a commencing infectious cholecystitis, that the pain and feeling of flatulence for which the patient tried a walk was a passive hæmorrhage which was increased by the walk, and that the collapse and fainting condition were due to the actual loss of blood, and the pain when her friends found her on the floor was due to the acute stretching of the walls of the gall-bladder.

It is noticeable that in acute cases of infectious cholecystitis in which the gall-bladder has dark, or mucopurulent, purulent, or hæmorrhagic contents the diagnosis is by no means easy. Osler says: "The symptoms may not indicate the section of the abdomen involved." Appendicitis is often diagnosed. Acute intestinal obstruction and other abdominal ills have also been diagnosed by some of the ablest men. Had we known more of our patient and had the symptoms occurred after typhoid fever or pneumonia, or had we waited longer, a correct diagnosis might have been made. But the patient was relieved, made an excellent recovery, and six months after was still quite well.

Exeter.

A CASE OF DOUBLE VAGINAL CYSTS.

BY H. MACNAUGHTON-JONES, M.D. Q.U.I.,
F.R.C.S. IREL. & EDIN.

IN *La Ginecologia* for December, 1905, Dr. Santi, who has made a special study of vaginal cysts, subdivides the various origins of these cysts thus: (1) Œdema and extravasation into the connective tissue; (2) lymphatic effusion; (3) introflexion and closure of vaginal folds; (4) vaginal glands; (5) abnormal evolution of, and formation in, Müller's tract; (6) remains of the Wolffian duct; and (7) partial closure of the pouch of Douglas. Mr. W. Roger Williams has written more fully on these cystic formations than any other British observer and classifies them thus: (1) Wolffian; (2) Müllerian; (3) "rests" of the secretory structure in the Wolffian body, in the cervical and vulvar

mucosa; (4) parasitic; (5) endothelial; (6) dermoid; and (7) papilliferous.[1] Howard Kelly looks to the scarred tissue of some traumatism; to Gärtner's ducts, and, following Rouget, to glandular degeneration for their origin. I am not here considering cysts arising from Skene's glands and urethral cysts. As to the size of these cysts, all authorities are agreed that it is very rare for them to reach the size of a hen's egg; it is more common to find them about that of a hazel nut or a cherry. They may be discovered in any part of the vaginal canal, in the vault, near the portio, in its wall, or in the vulva, more frequently anteriorly or laterally.

Before detailing the particulars of my case I may refer to that of Dr. Santi. In a patient who was suffering from cystocele three small cysts of the size of cherries were found. All three were on the same level and one inch distant from the urethra. These, with the adjacent tissue, were excised. It was then seen that they were connected together by a cord-like growth. Suffice it here to say that careful microscopical examination proved these cysts to be lined with cubical epithelium, the partition between them consisting of muscular tissue, alkaline matter, and connective tissue. The duct-like nature of the connecting links between these cysticles was proved, the lumen dilating at intervals to form the cystic cavities and preserving a close similarity in structure to these. From the position of these cysts and from embryological and histological grounds Dr. Santi concludes that there cannot be any doubt as to their Wolffian origin. This proof appears to be the most absolute of any hitherto published of their origin. The epithelial lining affords the best clue to the origin of these cysts. As will be seen in one of the cysts removed by me the lining epithelium was the same as that found in Dr. Santi's case—namely, cubical. Kelly says that in the cysts of glandular origin the epithelium is columnar but that when they arise from scar tissue it is squamous. Freund's description of Müllerian cysts is quoted by Williams as follows: "They are present in the portio and upper part of the vagina. They are thick-walled, with well-developed musculosa. Columnar epithelium lines the interior, sometimes ciliated. It may be involuted and cryptic. The contents are viscid and like white of egg."

My patient was a married woman, aged 35 years. She had had no children. She consulted me for endometritis, for which she was curetted in September, 1905. The variety proved to be glandular endometritis. In carrying out the curettage I discovered in the vaginal vault a cystic tumour fully of the size of a large pigeon's egg. This I dissected completely out but the glairy fluid escaped and I could not remove it in its entirety. Only part of the cyst could therefore be sent for examination. Dr. Cuthbert Lockyer reported that this was lined by epithelium of the spherical type. He thought that it might be a distension cyst found in some

pre-existing space. In December, 1905, the patient came again, complaining of vaginal distress and pain. On examination I was surprised to find low down on the posterior wall of the vagina, and inclining to the right side, a fair-sized cyst distended with fluid and nearly of the size of the one removed in September. This had evidently been concealed by the large blade of the retracting speculum at the time of operation. I determined to dissect the cyst out in its entirety so as to preserve it for careful examination. This I had some difficulty in doing, as its wall was thin and incorporated with the subjacent tissue in the recto-vaginal septum, and closely applied to the rectum. Through a small cut some of the thin clear fluid it contained escaped. The cyst, reduced in size from contraction through its preservation, is shown in the illustration. Dr. Lockyer reported it as "circular in shape, an inch in diameter, with a surrounding of fibro-muscular tissue. It has a convoluted waxy lining and in the depth between the folds the microscope shows the presence of cubical epithelium."

I am not aware of any cases having been published in which two cysts of the size I have mentioned, and obviously of different characters and origin, occurred in different portions of the vagina. It would seem to me as if the one which was in the vaginal vault had a glandular origin, whereas the one in the lower portion of the canal was of a Gärtnerian or Wolffian nature.

Harley-street, W.

[1] Vaginal Tumours with Special Reference to Cancer and Myoma, 1904.

AN ATTEMPT TO SIMPLIFY THE DIAGNOSIS OF OCULAR PARALYSIS.

BY WALTER H. HAW, B.A., M.R.C.S. ENG., L.S.A.

I HAVE been much interested in the two articles on the diagnosis of ocular paralysis which have lately appeared in THE LANCET[1] and have been gratified to find that general practitioners are not alone in their troubles in this matter. As a matter of fact, as taught in the text-books, this subject has become a mere effort of memory except in the case of those who have worked out the why and wherefore. I have usually found that it is easier to forget a mnemonic than the established facts of anatomy and physiology learnt in student days. If the mind can easily follow out the processes by which results are reached there will be no need of mnemonics. My aim in this communication is to try to explain the results of ocular paralysis in such a way that the diagnosis of the paralysed muscle is a perfectly simple matter and can be thought out straightforwardly and rapidly—at any rate theoretically.

Underlying the method are the following three statements learnt in student life: *A*. A paralysed ocular muscle cannot moved the eyeball in the direction of its action. *B*. When diplopia occurs as a result of paralysis the false image of a candle held in the field of action of the paralysed muscle is displaced in the direction of the action of that muscle. *C*. Paralysis of an inward-acting muscle produces crossed diplopia; paralysis of an outward-acting muscle produces uncrossed diplopia.

Inward-acting muscles	...	Superior, internal, inferior rectus.
Outward-acting muscles	...	Superior oblique, external rectus, inferior oblique.

I am sure it will be easier to remember the above three statements than any arbitrary mnemonic. Let me now apply them in the case of paralysis of the external rectus, the easiest to follow.

External rectus.—Action: moves the eyeball horizontally outwards. With paralysis the corresponding eyeball cannot move horizontally outwards consensually with its fellow which moves horizontally inwards. Hence, the image of a candle held in the field of action of the paralysed external rectus will fall, in the sound eye, on the yellow spot; in the unsound eye on the retina some distance from the yellow spot on the nasal side. The false image is projected towards the temporal side—i.e., in the direction of action of the external rectus muscle. Being an outward-acting muscle, the diplopia is uncrossed. In order to find out the effect of paralysis of the external rectus muscle we ask ourselves, What is its action? And the answer, helped out by the three foregoing statements, gives the effect of the paralysis. Thus the external rectus is an outward-acting muscle, therefore the diplopia is uncrossed; it moves the eyeball horizontally outwards, therefore the false image, in paralysis of it, is displaced horizontally outwards. So with all the other muscles.

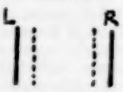
It is necessary also to remember another physiological fact, which may be added to the others, making four short statements to be committed to memory. *D*. The consensually acting muscles are as follows: External and opposite

[1] THE LANCET, Nov. 18th (p. 1495) and Dec. 2nd, 1905 (p. 1612).

internal rectus (eyes turned right or left); superior rectus and opposite inferior oblique (eyes turned upwards and towards the side of the oblique muscle); inferior rectus and opposite superior oblique (eyes turned downwards and towards the side of the oblique muscle). Omitting the external rectus, let me go through the actions of the muscles in order.

Action of the internal rectus.—Consensual with the opposite external rectus; inward acting (diplopia crossed). The eyeball is moved horizontally inwards (false image displaced horizontally inwards). (See Fig. 1.)

FIG. 1.



Superior rectus.—Consensual with the opposite inferior oblique; inward acting (diplopia crossed). The eyeball is moved upwards and inwards with a wheel motion inwards (the eyeball tends to roll towards the nose). The upward movement is most marked in the position of abduction and the wheel motion is most marked in the position of adduction, as is evident on consideration of the anatomical relations of the eyeball to its muscles. The false image is correspondingly displaced (see Fig. 2).

FIG. 2.

Inferior rectus.—Consensual with the opposite superior oblique; inward acting (diplopia crossed). The eyeball is moved downwards and inwards with a wheel motion outwards (the eyeball tends to roll towards the temporal region). The false image is correspondingly displaced. The downward action is greatest in the position of abduction, the wheel motion in the position of adduction (see Fig. 3).

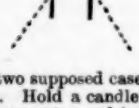
FIG. 3.

Inferior oblique.—Consensual with the opposite superior rectus; outward acting (diplopia uncrossed). The eyeball is moved upwards and outwards with a wheel motion outwards (the eyeball rolls towards the temporal region). The false image is correspondingly diplaced (see Fig. 4).

FIG. 4.

Superior oblique.—Consensual with the opposite inferior rectus; outward acting (diplopia uncrossed). The eyeball is moved downwards and outwards with a wheel motion inwards. The false image is correspondingly displaced (see Fig. 5).

FIG. 5.



To examine one or two supposed cases, place a red glass in front of the right eye. Hold a candle in the mid-line in the upper field. Suppose we get a red image on the right side which follows the movement of the candle (uncrossed diplopia, therefore an outward-acting muscle). Suppose, further, it is higher than the other; this points to an elevator. Therefore we have an outward-acting elevator of the right eye involved. This can only be the right inferior oblique.

Hold a candle in the lower field—that is, in the field of action of the inferior rectus and opposite superior oblique. If we get a red image on the left and below, which sinks on lowering the candle, we know it is the right eye which is affected. The diplopia being crossed tells us it is an inward-acting muscle of the right eye. The displacement downwards proves that it is a depressor. Therefore it is the inferior rectus.

It is now possible to follow mentally with ease Mr. E. E. Maddox's mnemonic as given by Dr. A. S. Percival. The wheel motions and the crossed or uncrossed nature of the diplopia being neglected, the relative height alone of the images is considered, in the right and left upper, and the right and left lower, fields.

The whole of the foregoing is ancient history but I have thought that in this form it may be of use. By making the two hands take the place of the two images it is possible to run rapidly through their various relations in the different forms of paralysis with very little mental effort. We can also easily follow Dr. D. M. Mackay's article without the aid of a diagram. In the example which he takes—viz., paralysis of an elevator of the right eye—let us proceed according to the foregoing method. With a red glass before the right eye, it is found that the red image is on the left of the yellow and higher and rises on lifting the candle. This shows crossed diplopia (inward-acting muscle) and paralysis of an elevator of the right eye—viz., the superior rectus; and as the elevating action increases in the abducted position, the false image will rise on moving the candle outwards (to the right). In the case of paralysis of the inferior oblique of the right eye it is an outward-acting muscle (uncrossed diplopia), so that the red image would be on the right of the yellow and higher, and on moving the candle to the left the false image would rise higher, for the right eye would become adducted, in which position elevation is most marked.

Knysna, Cape Colony.

ERRATUM.—Sir William H. Bennett points out that the diagram in his lecture upon Appendicostomy, which appeared in THE LANCET of Feb. 17th, was reversed in the printing.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE OF A CASE OF CONFLUENT VARICELLA.

BY J. T. NEECH, M.D. DURH., D.P.H.,
MEDICAL OFFICER OF HEALTH OF HALIFAX.

THE patient, a female, aged four years, was admitted into the Halifax borough fever hospital suffering from a mild attack of scarlet fever. She made favourable progress until the evening of Jan. 3rd, 1906, when without any premonitory symptoms the temperature suddenly went up to 102° F. One or two papules on the face and body were then present and on the following morning a profuse crop of both papules and vesicles appeared all over the body and legs. The skin generally was very much congested where the rash appeared. The papules which had appeared on the previous day had now become pustular. The temperature remained near 102° during the 4th but on the morning of the 5th it fell to normal. In the meantime the vesicles increased in number and size and became confluent on the body and especially on the thighs, many of them being umbilicated. On the evening of the 6th the temperature again went up to 101·4°, which was followed by a further crop of papules and vesicles on the face, head, and arms almost as profuse as the former crop on the body. A number of the vesicles on the body and legs had now become pustular. On the evening of the 7th the temperature had fallen to 99°. It rose again to 100·4° on the 8th and fell to normal on the 9th and afterwards remained there. There was œdema of the face, a great many

of the vesicles became pustular, and the fœtor was more marked than in many cases of small-pox. Desiccation was not complete until about Jan. 31st. The eruption appeared on the palms of the hands and the soles of the feet but the amount in these situations relative to that which appeared on the arms and legs was very much less. The difference was well marked, and this fact, together with the rapidity with which the eruption developed and passed through its various stages, and the successive crops which appeared, as well as the absence of premonitory symptoms, removed all doubt as to the true nature of the disease.

Halifax.

A NOTE ON THE VALUE OF MASSAGE OF THE STOMACH IN FLATULENT DYSPEPSIA.

BY H. STATHAM, M.B., B.C. CANTAB.,
LATE HOUSE SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

A GENTLEMAN of my acquaintance has for many years suffered from attacks of flatulent dyspepsia at intervals varying from a few days to several months. These attacks come on quite suddenly with great oppression in the epigastrium, a general feeling of malaise, profuse sweating, and a small and rapid pulse, ranging from 120 to 150. The duration of the attacks varies from an hour or two up to 12 hours or more, and they cease spontaneously as suddenly as they begin. Nothing in the way of drugs or applications appears to have any effect in bringing about the termination of the attack. A short time ago I tried massage of the stomach during one of these attacks, the massage being of the character of somewhat forcible kneading movements. Almost at once gurgling sounds could be heard from time to time as if the contents of the stomach were passing into the duodenum, and within ten minutes the attack was at an end. This treatment has been tried on the same patient in two subsequent attacks, once by myself and once by a friend, with an equally favourable result on each occasion. It would appear from this that the attacks above described are brought about by a paralytic distension of the stomach due to gases produced by a fermentative process, and that the massage by stimulating the organ to action causes its contents to be passed on into the bowel. This view is supported by the fact that on one of the above occasions after the attack had been brought to an end by massage very large quantities of gas were passed per anum.

Lymington, Hants.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

EAST SUFFOLK AND IPSWICH HOSPITAL.

A CASE OF "VOLVULUS OF THE CÆCUM" PRODUCED BY THE TRACTION OF AN INFLAMED APPENDIX.

(Under the care of Dr. E. HOLLIS.)

FOR the notes of the case we are indebted to Mr. S. Clifford Hayman, house surgeon.

The patient was a delicate looking woman, aged 50 years. For one week before admission to the East Suffolk and Ipswich Hospital she had suffered indefinite pain in the abdomen and had vomited about once a day, but she was not too ill to keep about the house. There was also some constipation, which led her to take some castor oil on the morning of the fifth day. This was followed by diarrhœa in the evening. The next morning she awoke with severe pain in the lower part of the abdomen and she began to vomit frequently. The symptoms not abating she sent for Dr. E. Hollis. Bismuth was prescribed but after 48 hours it became evident that there was intestinal obstruction and she was sent into hospital for operation. When seen in the ward the patient looked fairly comfortable though a little pale and she only complained of slight pain in the lower part of "her body," not so severe as it had been, and said that she felt sick. Her temperature was 96° F., her pu'se was 88 and feeble, and her respirations were 32 per minute. The tongue was slightly furred. Examination of the chest behind was postponed. The abdomen was much distended, the distension being markedly of the small-gut type. The abdominal wall was soft and moved slightly on respiration. There was some general tenderness but it was most marked in the region of the appendix. No definite swelling could be palpated anywhere and the percussion note was tympanitic. Sounds of peristalsis were heard in normal amount. Rectal examination yielded no useful information. The urine had a specific gravity of 1035, contained a large quantity of albumin, and gave the tests for sugar and diacetic acid.

It was decided to operate immediately and the patient was anæsthetised at 5.50 P.M. The abdomen having been opened by an incision in the middle line below the umbilicus a tense cystic swelling presented which much resembled an ovarian cyst but proved to be an enormously distended cæcum. A trocar was inserted and a large amount of gas together with eight ounces of fluid (black from the bismuth administered) was evacuated. The small intestine was likewise distended; not so the colon. The cæcum was next drawn out and its attachments were explored. It was found that it had undergone rotation "clockwise" through half a circle, complete intestinal obstruction being produced by occlusion of its lumen at either end. At its attachment to the posterior abdominal wall on its outer aspect and helping in the constriction was found a densely adherent appendix two and a half inches in length running upwards and backwards to a point just above the cæco-colic junction, where its apex was held by a fibrous band of no very recent formation. It was freed, cut off short, and its base inverted into the cæcum. The volvulus was next unwound, a small amount of serous fluid was sponged out of the pelvis, and the abdominal wound closed. The patient only vomited once after returning to the ward and passed a comfortable night. The following morning there was a slight action of the bowels and all appeared to be going well until the next day at noon. She was then noticed to be getting drowsy. Her pulse was 100 and weaker, her respirations had risen to 45 per minute, and there was a little œdema of the face. Crepitations were audible all over the right lung behind. Stimulants were administered but the patient became quickly more drowsy and restless, so that by 5 P.M. she could not be roused. Her pupils were moderately dilated and her temperature, subnormal throughout, fell steadily. The usual treatment for uræmia was carried out but the patient died at 8.30 P.M.

Necropsy.—A post-mortem examination showed that the operation had quite removed the obstruction and there was no peritonitis. A meso-cæcum was present and it was found very easy to reproduce the volvulus. The kidneys were granular and there was advanced tuberculosis of the right lung.

Remarks by Mr. HAYMAN.—There is no doubt that the above is one of those cases, sometimes described in book but so very rarely seen, where an inflamed appendix has, by contraction and traction, produced a volvulus of the cæcum. I am indebted to Dr. Hollis for permission to publish the case.

MELBOURNE HOSPITAL.

(1) A CASE OF COMPLETE ROTATION OF A PREGNANT UTERUS (2) TRAUMATIC RUPTURE OF A HYDATID CYST IN THE LEFT LOBE OF THE LIVER; AND (3) HYDATID OF THE LIVER WITH PASSAGE OF SMALL CYSTS THROUGH BILE-DUCTS, SIMULATING GALL-STONES.

(Under the care of Mr. G. A. SYME.)

CASE 1. *Complete rotation of a pregnant uterus.*—The patient, a married woman, aged 26 years, was admitted into the Melbourne Hospital on May 29th, 1905. She was collapsed and profoundly blanched and complained of severe pain in the abdomen, which had come on suddenly three days previously. She believed herself to be six months pregnant. There had been no previous symptoms and she had met with no injury. She had been married four years and had two healthy children. She had no bleeding from the

womb and no other symptoms. Her pulse was 190 and very small and feeble. A tumour was present in the lower abdomen, centrally situated, extending above the umbilicus; it was soft and elastic and like a pregnant uterus. What was regarded as the os was high up and soft. The fornices appeared to be free. A median laparotomy was immediately performed under ether anæsthesia. The tumour, apparently the uterus, was almost black in colour, and on passing the hand down into the pelvis it was found to have a narrow pedicle, which on further examination was found to be twisted twice from right to left. As the tumour was too large to deliver from the incision a trocar was inserted into it and a quantity of very dark fluid blood was drawn off. Still it could not be delivered, so it was incised and a quantity of clot was expressed. The abdominal incision was enlarged and the tumour was delivered. The pedicle was transfixed with strong silk and tied off with three interlocking ligatures, and the tumour was removed with scissors. Throughout the operation the abdomen was irrigated with hot saline solution and saline solution was infused into the median basilic vein. The patient was practically pulseless all through, improving a little, but died shortly after leaving the operating room. The tumour was the uterus containing a six months fœtus, the incision passing through the vaginal wall just below its attachment to the cervix.

CASE 2. *Traumatic rupture of a hydatid cyst in the left lobe of the liver.*—The patient, a man, aged 43 years, was admitted into the Melbourne Hospital on Feb. 15th, 1905, complaining of severe pain in the left upper abdomen, greatly increased by any movement, especially of the abdominal muscles. On the 13th he had fallen into an excavation and on to the handle of a pick-axe which struck him below the ribs on the left side of the abdomen. He passed urine shortly after the accident and thought it was rather dark and smoky, but it had been quite natural in appearance since. The stools had been natural and free from any sign of blood. He said that he used to have a swelling in the left side which had diminished since the accident. He also had a sense of fulness there and occasional attacks of "stitch." On examination great tenderness was found in the left hypochondriac and epigastric regions, with some rigidity of the abdominal muscles on the left side. On percussion an area of absolute dulness existed for about three inches below the left margin of the thorax with relative dulness in the left flank. The physical signs in the thorax were normal. The temperature was 99·6° F. and the pulse was 76. The urine gave an acid reaction, was of specific gravity 1010, and contained no albumin, sugar, or blood cells. An exploratory operation was advised but declined by the patient. The pain gradually diminished but it was found that the area of dulness varied, at some times appearing increased, at others less. He left the hospital on March 1st at his own request. He was readmitted on the 4th as the pain had returned. The physical signs were the same. He was examined with the x rays, which showed an opacity in the area of dulness situated below the diaphragm, although the dulness itself had almost gone on the day he was "screened." Two days later the dulness was again present and a definite swelling could be palpated in the left hypochondrium. The patient now agreed to submit to operation, which was performed on the 10th under ether anæsthesia.

A vertical incision was made through the outer border of the left rectus, the sheath was opened, the muscle was retracted inwards, the posterior sheath was incised, and the peritoneum was opened, exposing a very thin-walled cyst immediately below the incision. It extended above to the stomach and liver and below was adherent to intestine, apparently projecting forwards above the transverse colon. It was not at all tense. The cyst was packed off with gauze and incised, when a quantity of milky fluid and small hydatid cysts escaped. Over 100 cysts, evidently daughter cysts, and over three pints of fluid were evacuated. The cyst was marsupialised and a large drainage-tube was introduced. The cyst wall was evidently not hydatid but simply thickened peritoneum. The original hydatid cyst was probably in the left lobe of the liver and had been ruptured by the fall on the pick handle. The contents were then extravasated into the lesser sac of the peritoneum and came to the surface through the great omentum below the stomach. As they did not completely fill the lesser sac the area of dulness varied with change of position and varying degree of distension of the surrounding hollow viscera. The further progress of the case was uneventful. There was very little discharge and the tube was removed in a week. The patient was discharged on April 3rd.

CASE 3. *Hydatid of the liver, with passage of small cysts through the bile-ducts, simulating gall-stones.*—The patient, a man, aged 21 years, was admitted into the Melbourne Hospital on May 1st, 1905, under the care of Dr. J. E. Nihill. He complained of abdominal pain and vomiting. The pain had come on very suddenly while at work on April 29th and was very severe. He had an attack of shivering and vomited almost directly the pain came on. The pain continued and prevented him from sleeping. He had also vomited frequently. He was tender in the right hypochondrium and the right side of the abdomen was rather rigid. The temperature was 100° F. and the pulse was 96. The heart, lungs, and urine were normal. The liver dulness extended up to the fifth space in the mid-axilla. On May 2nd the temperature was 101·5°, the conjunctivæ were yellow, and bile was present in the urine. The pain was still very severe, coming on in paroxysms. On the 4th Mr. Syme was asked to see the patient. On that morning the nurse discovered in his motion, which had been washed and sieved, three pieces of yellow membrane, looking like hydatid. A subsequent microscopical examination showed that they were portions of hydatid cyst wall. Operation was decided on and the patient was transferred to the care of Mr. Syme.

On May 5th the patient was anæsthetised with ether. An exploring needle introduced into the sixth interspace in the mid-axillary line revealed pus. A portion of the seventh rib was resected, the pleura was incised, and the diaphragm was exposed. The diaphragmatic and parietal pleuræ were stitched together with catgut. The diaphragm was incised and the surface of the liver was exposed; it appeared to be normal. A trocar and cannula were inserted; at a depth of about an inch turbid fluid was withdrawn. Rather free bleeding occurred from the track of the trocar. The thermo-cautery was applied along the trocar and an opening was made with the cautery into a large cyst, turbid, semi-purulent fluid and small daughter cysts escaping and then bile. The cavity was irrigated with saline solution and the mother cyst was removed. The cyst wall was sutured to the skin incision with mattress sutures of silkworm gut. A rubber drainage-tube was inserted and packed round with iodoform gauze. Bile continued to discharge for a long time but recovery was otherwise uninterrupted. The patient left the hospital on June 12th.

Remarks by Mr. SYME.—I regret that the notes on Case 1 are so meagre but the patient was so low that a full history could not be obtained, and the operation had to be performed so rapidly that a careful investigation of the exact condition was not possible. Still the case is so unusual that I thought it should be recorded. I had hoped to be able to find references to similar cases but a search through the literature available in the medical libraries in Melbourne has been fruitless.

Case 2 is of medico-legal interest, as the patient brought an action against his employers to recover damages, alleging that his fall was owing to negligence on their part. The defence urged that his illness, operation, and consequent loss of wages were due to his having a hydatid and that the accident, by rupturing it and necessitating an operation, really was to his advantage, as the cyst was bound to have given rise to trouble and would require operation at some time. The case was decided in his favour.

In Case 3 there can be little doubt that the symptoms, which at first resembled those of gall-stones, were due to the passage of small portions of daughter cysts down the dilated bile ducts and an ascending infection of the cyst from the intestine. I have seen two similar cases at long intervals which were under the care of colleagues, one of which was recognised only post mortem.

PLYMOUTH BOROUGH ASYLUM. — After being about two years under construction the extension of the Plymouth Borough Asylum at Blackadon is now finished. Two large wings, one for male and the other for female patients, have been added to the old building and an additional storey has also been raised. These additions enable the asylum to provide accommodation for 500 patients, and as at the present time there are only 300 inmates the Plymouth authorities will be able to assist Devonport and other towns which have no asylum by receiving their patients.

Medical Societies.

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The storage of cells in normal marrow or lymph glands, or in fœtal marrow, liver, or thymus was comparable to the condition of the spleen and liver in myelo- or lymphocythæmia, splenic anæmia of infants, and chronic lead poisoning. These cases had been described together as being types of uncommon diseases of blood-forming organs and as illustrating the distribution and interdependence of areas of the hæmopoietic system. As seen in these cases acute lymphocythæmia was characterised by enormous relative and absolute increase of small and large lymphocytes in the blood and with well-marked lymphoid lesions in the bone marrow and the spleen and other viscera. Leukanæmia or myeloid splenic anæmia presented as features an anæmia of the red cells resembling pernicious anæmia and changes in the colourless cells allied to, but distinct from, myelæmia. The marrow, the spleen, and the liver were myeloid in character. 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Dr. BERNSTEIN also gave a description of Doubling of the Spinal Cord. The lumbar cord showed bifurcation, starting in the first lumbar segment and becoming complete in the third lumbar segment, at which level there existed two almost complete cords, with complete grey and white matter. Below this fusion again took place and was almost complete in the sacral region but not quite symmetrical. The outer cornua of each half, however, were better developed than the inner and all the nerve cells and roots were in connexion with the outer cornua. Comparison with other recorded cases showed the doubling to be as complete as any, and so the pseudo inner cornua having no nerve cells or nerve roots associated and the grey matter being much cut up by bundles of white matter, would suggest a division of the cord with resulting diffusion and readjustment of the divided portions of the grey matter into pseudo-cornua.

Mr. SHATTOCK recorded an example of an extremely rare lesion—viz., Primary Carcinoma of the Male Urethra—which occurred in a man, aged 54 years. The disease was limited to about the anterior one and a half inches of the canal, and was absolutely intra-urethral, the glans and prepuce being quite unaffected. The part was amputated by Mr. P. A. Lloyd of Haverfordwest for the reason that he felt sure that the disease was malignant. The growth had a papillary surface and for its anterior portion might be classed as a papilloma; posteriorly, however, it invaded the corpus spongiosum and had all the characters of a squamous celled carcinoma. Kauffmann in his monograph on "Injuries and Diseases of the Male Urethra" had been able to collect only four cases of primary carcinoma in which the diagnosis was microscopically authenticated. In all the bulbous portion was the seat, the disease following injury

or stricture. Dr. Joseph Griffiths had added another which was under the care of the late Sir George Murray Humphry. It was noteworthy that in all these cases the histological characters were those of a squamous-celled carcinoma, although the epithelium of the bulbous portion was constructed of a surface layer of cubical or columnar cells and beneath these of a series of polymorphous elements. In the normal bulbous urethra Mr. Shattock had found areas of large squamous cells in the polyhedral group and the origin of squamous-celled growths probably took place by a metaplastic change of this kind.

LIVERPOOL MEDICAL INSTITUTION.

Punctured Wound of the Anterior and Posterior Tibial Arteries, Ligation, Gangrene of Toes.—Case of Pulmonary Tuberculosis inoculated with Koch's New Tuberculin, the Opsonic Index being taken as a Guide.—A Case of Pellagra occurring in England.—Acute Nephritis.

A MEETING of this society was held on Feb. 6th, Mr. FRANK T. PAUL, the President, being in the chair.

Mr. G. P. NEWBOLT read notes of a case of Stab Wound of the Anterior and Posterior Tibial Arteries and Posterior Tibial Veins at the lower end of the popliteal space. It was necessary to ligature the lower end of the popliteal artery and also the ends of the wounded arteries and veins. Gangrene of the toes ensued, the line of demarcation forming at the metatarso-phalangeal joints. The patient was likely to have a useful foot.—Mr. R. W MURRAY said that a case had been recorded in which end-to-end anastomosis of a divided popliteal artery had been successfully performed, and he thought that in the case which Mr. Newbolt had related anastomosis of the divided tibial vessels might with advantage have been tried.—The PRESIDENT referred to two cases bearing on Mr. Newbolt's remarks: one, a case of popliteal aneurysmal varix due to gunshot wound, in which he had ligatured the artery above and below the orifice; the other, a diffuse popliteal aneurysm, in which he had turned out the clots and tied the artery above and below the sac. In the former case the patient just escaped gangrene; in the latter gangrene occurred and he had to amputate the limb.

Dr. R. J. M. BUCHANAN read a note on a case of Pulmonary Tuberculosis which had been treated for some months with excellent result in a sanatorium. During a relapse, at a later period, inoculations with Koch's new tuberculin were commenced by Dr. F. R. Walters and had been continued by Dr. Buchanan since, the opsonic index being used as a guide. It was interesting to note that under relatively large doses, above $\frac{1}{10}$ milligramme, the index rose, but on reverting to the smaller doses of $\frac{1}{1000}$ milligramme it had gradually fallen to below 0·8. No pyrexial reaction followed the inoculations, but with the larger doses the patient had for two or three days slight dyspnœa and lassitude. The local and general result had proved most encouraging, cough and expectoration having disappeared, as had also enlarged glands from both axillæ.—Dr. T. R. BRADSHAW said that the report of the case was of especial interest because most of the successful cases hitherto published were those of external tuberculosis, probably because in them the evidence of recovery was more easily demonstrated. He had seen the cases successfully treated by Professor A. E. Wright and they were most striking and convincing. In cases where auto-infection was taking place there was generally a variable opsonic index, due to the fact that the patient was receiving irregular doses of toxin, with the production of a negative phase, followed by more or less temporary immunity.—Dr. WILLIAM CARTER, Dr. G. A. CRACE-CALVERT, and Dr. J. HILL ABRAM also joined in the discussion.

Dr. A. CASSELS BROWN read notes of a case of Pellagra occurring in England. The symptoms having raised a suspicion as to the true nature of the disease it was found that the patient, a young girl, had been in the habit of eating some of the maize with which she fed fowls and also that some of the fowls had died after eating the maize.

Dr. A. GORDON GULLAN read a paper on Acute Nephritis (Morbus Brightii) and its Treatment, based on observations made on 42 cases of that disease. Among the predisposing causes Dr. Gullan placed a "previous attack," of which there was a distinct history in four of his cases; acute rheumatism was one of the rare exciting causes and was illustrated by a typical example, but cold and wet and scarlet fever were the common causes. He considered that polyuria and a moist skin were favourable signs and noted that in some instances a fall of blood pressure, as shown by the sphygmometer, occurred when the albuminuria was disappearing. Œdema was present in all the cases, but in one, with very marked evidence of the disease, there was no albumin in the very scanty urine for four days. The modes of termination, recurrences, and relapses were described and also a subacute nephritis which occurred in persons who had already suffered from the acute affection. Dr. Gullan advocated a strict milk diet and strongly deprecated the use of solid or nitrogenous foods and gave several examples to show that they were the frequent cause of aggravation and prolongation of the complaint. Free purgation by means of hydragogues, free diaphoresis, and counter irritation over the loins were recommended. He considered that digitalis and stimulating diuretics should never be used except in cases with complications, such as cardiac failure. The treatment of uræmia should be most vigorous; bleeding followed by the intravenous injection of a saline solution together with the judicious administration of pilocarpine was advocated. Dr. Gullan had also found chloroform inhalations useful in certain cases of uræmic asthma and convulsions.—Dr. CARTER, while agreeing generally with Dr. Gullan, differed from him on the following points: he thought that pilocarpine should never be injected in uræmic coma, owing to the abundant bronchial secretion it produced; and secondly, he objected to the total exclusion of morphine—where the complex of retained urinary poisons produced dilatation of the pupils instead of contraction, as well as other symptoms similar to those caused by atropine; a hypodermic injection of a quarter of a grain brought natural sleep followed by cessation of convulsions. Thirdly, oxygen might often be freely administered with great advantage; the dissolved oxygen of the blood serum might be increased five-fold by this method, and he was sure that he had seen lives saved by it, owing probably to the oxidation of toxic products to the condition of harmless urea, as the urea was certainly increased after giving it. Lastly, in cases of total suppression a hypodermic injection of two or three grains of caffeine dissolved in a solution of salicylate of sodium would be followed by the passage of a little bloody urine and then by copious diuresis. One drachm of salicylate solution would dissolve 20 grains of caffeine.—Dr. BRADSHAW said that a moderate rise of blood pressure in the course of acute Bright's disease was of good augury, the worst cases being those in which the pressure remained permanently low.—Dr. A. STOOKES regretted that Dr. Gullan had not discussed the question of treatment of severe uræmia associated with pregnancy. No mention had been made of certain methods of treatment which were at present interesting obstetricians—e.g., large doses of morphine, thyroid extract, lavage of the stomach, and injection of normal saline solution into the cellular tissue or veins. Dr. Stookes wished to draw attention to a remarkable series of cases lately published by the Rotunda Hospital where 71 cases of eclampsia were treated with a mortality of 16·9 per cent.—Dr. J. LLOYD ROBERTS called attention to the fact that nephritis occasionally occurred in children as a complication of mumps—a fact which made the routine examination of the urine in this complaint desirable. He also referred to the usefulness of morphine in certain case of uræmic dyspnœa.—Sir JAMES BARR, Dr. E. T. DAVIES, and Dr. BUCHANAN also spoke.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Feb. 9th, Sir Shirley F. Murphy, the President, being in the chair.—Dr. A. K. Chalmers of Glasgow opened a discussion on the Causes of Infant Mortality by pointing to the remarkable contrast which it presented both in time and place. It was higher in England than in Scotland and lowest in Ireland, although the general death-rates were in the reverse order. It was higher in towns than in the country but the difference between the towns and their suburbs was still greater. In the Scottish islands, where the sanitary conditions of the dwellings were inconceivably filthy, it was only 76 per 1000 births, the lowest in the United Kingdom, except in some residential quarters of great towns, as of Glasgow, where it was 74. On the whole it was not stationary but tending to increase. Throughout Great Britain there was a marked improvement in the "seventies," which might have been ascribed to the general sanitary improvement that followed the passing of

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Dr. J. M. BERNSTEIN read an account of Phlegmonous Gastritis in a woman, aged 65 years, who died from septicæmia after five days' illness marked by vomiting and rigors and slight pyrexia. There was a history of an acute alcoholic bout and of chronic alcoholism. The stomach showed diffuse purulent infiltration of the submucosa, especially marked at the pyloric end, where a layer of pus half an inch thick separated the mucosa from the serosa. Microscopically there was great hyperæmia and also cell infiltration of the muscular coats and mucosa. The mucosa and serosa were intact and the epithelium was fairly normal. Bacteriologically streptococci were found in the pus and pure cultures were obtained from the spleen.

Dr. BERNSTEIN also gave a description of Doubling of the Spinal Cord. The lumbar cord showed bifurcation, starting in the first lumbar segment and becoming complete in the third lumbar segment, at which level there existed two almost complete cords, with complete grey and white matter. Below this fusion again took place and was almost complete in the sacral region but not quite symmetrical. The outer cornua of each half, however, were better developed than the inner and all the nerve cells and roots were in connexion with the outer cornua. Comparison with other recorded cases showed the doubling to be as complete as any, and so the pseudo inner cornua having no nerve cells or nerve roots associated and the grey matter being much cut up by bundles of white matter, would suggest a division of the cord with resulting diffusion and readjustment of the divided portions of the grey matter into pseudo-cornua.

MR. SHATTOCK recorded an example of an extremely rare lesion—viz., Primary Carcinoma of the Male Urethra—which occurred in a man, aged 54 years. The disease was limited to about the anterior one and a half inches of the canal, and was absolutely intra-urethral, the glans and prepuce being quite unaffected. The part was amputated by Mr. P. A. Lloyd of Haverfordwest for the reason that he felt sure that the disease was malignant. The growth had a papillary surface and for its anterior portion might be classed as a papilloma; posteriorly, however, it invaded the corpus spongiosum and had all the characters of a squamous-celled carcinoma. Kauffmann in his monograph on "Injuries and Diseases of the Male Urethra" had been able to collect only four cases of primary carcinoma in which the diagnosis was microscopically authenticated. In all the bulbous portion was the seat, the disease following injury

or stricture. Dr. Joseph Griffiths had added another which was under the care of the late Sir George Murray Humphry. It was noteworthy that in all these cases the histological characters were those of a squamous-celled carcinoma, although the epithelium of the bulbous portion was constructed of a surface layer of cubical or columnar cells and beneath these of a series of polymorphous elements. In the normal bulbous urethra Mr. Shattock had found areas of large squamous cells in the polyhedral group and the origin of squamous-celled growths probably took place by a metaplastic change of this kind.

LIVERPOOL MEDICAL INSTITUTION.

Punctured Wound of the Anterior and Posterior Tibial Arteries, Ligation, Gangrene of Toes.—Case of Pulmonary Tuberculosis inoculated with Koch's New Tuberculin, the Opsonic Index being taken as a Guide.—A Case of Pellagra occurring in England.—Acute Nephritis.

A MEETING of this society was held on Feb. 6th, Mr. FRANK T. PAUL, the President, being in the chair.

Mr. G. P. NEWBOLT read notes of a case of Stab Wound of the Anterior and Posterior Tibial Arteries and Posterior Tibial Veins at the lower end of the popliteal space. It was necessary to ligature the lower end of the popliteal artery and also the ends of the wounded arteries and veins. Gangrene of the toes ensued, the line of demarcation forming at the metatarso-phalangeal joints. The patient was likely to have a useful foot.—Mr. R. W MURRAY said that a case had been recorded in which end-to end anastomosis of a divided popliteal artery had been successfully performed, and he thought that in the case which Mr. Newbolt had related anastomosis of the divided tibial vessels might with advantage have been tried.—The PRESIDENT referred to two cases bearing on Mr. Newbolt's remarks: one, a case of popliteal aneurysmal varix due to gunshot wound, in which he had ligatured the artery above and below the orifice; the other, a diffuse popliteal aneurysm, in which he had turned out the clots and tied the artery above and below the sac. In the former case the patient just escaped gangrene; in the latter gangrene occurred and he had to amputate the limb.

Dr. R. J. M. BUCHANAN read a note on a case of Pulmonary Tuberculosis which had been treated for some months with excellent result in a sanatorium. During a relapse, at a later period, inoculations with Koch's new tuberculin were commenced by Dr. F. R. Walters and had been continued by Dr. Buchanan since, the opsonic index being used as a guide. It was interesting to note that under relatively large doses, above $\frac{1}{10}$ milligramme, the index rose, but on reverting to the smaller doses of $\frac{1}{1000}$ milligramme it had gradually fallen to below 0·8. No pyrexial reaction followed the inoculations, but with the larger doses the patient had for two or three days slight dyspnœa and lassitude. The local and general result had proved most encouraging, cough and expectoration having disappeared, as had also enlarged glands from both axillæ.—Dr. T. R. BRADSHAW said that the report of the case was of especial interest because most of the successful cases hitherto published were those of external tuberculosis, probably because in them the evidence of recovery was more easily demonstrated. He had seen the cases successfully treated by Professor A. E. Wright and they were most striking and convincing. In cases where auto-infection was taking place there was generally a variable opsonic index, due to the fact that the patient was receiving irregular doses of toxin, with the production of a negative phase, followed by more or less temporary immunity.—Dr. WILLIAM CARTER, Dr. G. A. CRACE-CALVERT, and Dr. J. HILL ABRAM also joined in the discussion.

Dr. A. CASSELS BROWN read notes of a case of Pellagra occurring in England. The symptoms having raised a suspicion as to the true nature of the disease it was found that the patient, a young girl, had been in the habit of eating some of the maize with which she fed fowls and also that some of the fowls had died after eating the maize.

Dr. A. GORDON GULLAN read a paper on Acute Nephritis (Morbus Brightii) and its Treatment, based on observations made on 42 cases of that disease. Among the predisposing causes Dr. Gullan placed a "previous attack," of which there was a distinct history in four of his cases; acute rheumatism was one of the rare exciting causes and was illustrated by a typical example, but cold and wet and scarlet fever were the common causes. He considered that polyuria and a moist skin were favourable signs and noted that in some instances a fall of blood pressure, as shown by the sphygmometer, occurred when the albuminuria was disappearing. Œdema was present in all the cases, but in one, with very marked evidence of the disease, there was no albumin in the very scanty urine for four days. The modes of termination, recurrences, and relapses were described and also a subacute nephritis which occurred in persons who had already suffered from the acute affection. Dr. Gullan advocated a strict milk diet and strongly deprecated the use of solid or nitrogenous foods and gave several examples to show that they were the frequent cause of aggravation and prolongation of the complaint. Free purgation by means of hydragogues, free diaphoresis, and counter irritation over the loins were recommended. He considered that digitalis and stimulating diuretics should never be used except in cases with complications, such as cardiac failure. The treatment of uræmia should be most vigorous; bleeding followed by the intravenous injection of a saline solution together with the judicious administration of pilocarpine was advocated. Dr. Gullan had also found chloroform inhalations useful in certain cases of uræmic asthma and convulsions.—Dr. CARTER, while agreeing generally with Dr. Gullan, differed from him on the following points: he thought that pilocarpine should never be injected in uræmic coma, owing to the abundant bronchial secretion it produced; and secondly, he objected to the total exclusion of morphine—where the complex of retained urinary poisons produced dilatation of the pupils instead of contraction, as well as other symptoms similar to those caused by atropine; a hypodermic injection of a quarter of a grain brought natural sleep followed by cessation of convulsions. Thirdly, oxygen might often be freely administered with great advantage; the dissolved oxygen of the blood serum might be increased five-fold by this method, and he was sure that he had seen lives saved by it, owing probably to the oxidation of toxic products to the condition of harmless urea, as the urea was certainly increased after giving it. Lastly, in cases of total suppression a hypodermic injection of two or three grains of caffeine dissolved in a solution of salicylate of sodium would be followed by the passage of a little bloody urine and then by copious diuresis. One drachm of salicylate solution would dissolve 20 grains of caffeine.—Dr. BRADSHAW said that a moderate rise of blood pressure in the course of acute Bright's disease was of good augury, the worst cases being those in which the pressure remained permanently low.—Dr. A. STOOKES regretted that Dr. Gullan had not discussed the question of treatment of severe uræmia associated with pregnancy. No mention had been made of certain methods of treatment which were at present interesting obstetricians—e.g., large doses of morphine, thyroid extract, lavage of the stomach, and injection of normal saline solution into the cellular tissue or veins. Dr. Stookes wished to draw attention to a remarkable series of cases lately published by the Rotunda Hospital where 71 cases of eclampsia were treated with a mortality of 16·9 per cent.—Dr. J. LLOYD ROBERTS called attention to the fact that nephritis occasionally occurred in children as a complication of mumps—a fact which made the routine examination of the urine in this complaint desirable. He also referred to the usefulness of morphine in certain case of uræmic dyspnœa.—Sir JAMES BARR, Dr. E. T. DAVIES, and Dr. BUCHANAN also spoke.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Feb. 9th, Sir Shirley F. Murphy, the President, being in the chair.—Dr. A. K. Chalmers of Glasgow opened a discussion on the Causes of Infant Mortality by pointing to the remarkable contrast which it presented both in time and place. It was higher in England than in Scotland and lowest in Ireland, although the general death-rates were in the reverse order. It was higher in towns than in the country but the difference between the towns and their suburbs was still greater. In the Scottish islands, where the sanitary conditions of the dwellings were inconceivably filthy, it was only 76 per 1000 births, the lowest in the United Kingdom, except in some residential quarters of great towns, as of Glasgow, where it was 74. On the whole it was not stationary but tending to increase. Throughout Great Britain there was a marked improvement in the "seventies," which might have been ascribed to the general sanitary improvement that followed the passing of

the Public Health Act of 1875 were it not that since the later "eighties" there had been an increase, in some places rising as high as, or higher than, ever, though in Glasgow and Manchester the maxima fell short of the minima of the "seventies," the greatest increase having been in the smaller towns and the rural districts. The rise had been more marked in Birmingham, Aberdeen, and Dundee than in most of the great manufacturing towns. In what age periods had the chief changes taken place? Confining his inquiries to Glasgow and taking the data afforded by the first three years in each decade since 1870 he found that while the total death-rate was now lower by 15 per cent. the decrease between the ages of six and 12 months was 30 per cent. and between those of three and six months 16 per cent. but from birth to the age of three months the rate had remained stationary. Thus the improvement appeared in those periods during which infants began to be exposed to the same diseases, infectious and other, to which older children were subject and which were more or less amenable to sanitation and preventive measures, but there was none in that in which the causes were rather antenatal influences and the physical and moral deterioration of the parents as alcoholism, syphilis, and the like. There was, therefore, no evidence tending to justify the suggestion that the falling birth-rate produced a stronger and more viable generation. The data were exhibited in the following table:—

	0-3 months. Per 1000.	3-6 months. Per 1000.	6-12 months. Per 1000.	0-12 months. Per 1000.
1870-2	72	31	67	170
1880-2	66	25	58	148
1890-2	70	25	54	149
1900-2	72	20	47	145

From which it would be seen that the mortality in the first three months had remained stationary, while in the next quarter it had fallen by 16 and in the following half year by 30 per 1000, giving for the first year of life a total saving of 15 lives per 1000 born. Seeking an explanation of the causes of the fall and the subsequent rise in the diseases to which the largest number of deaths were ascribed, it would be seen that the curves of total mortality closely followed those of deaths from diarrhœa; diseases of the digestive and of the nervous system, including convulsions, which should properly be referred to the digestive system, accounting for a large number of deaths. The correspondence between the temperature of the third quarter of the year and the general mortality was connected with that from diarrhœa but these facts did not furnish an answer to the question whether the recent rise was due to a recrudescence of conditions existing prior to 1870 or to the introduction of new factors, social or other. The problems of ill-fed children and inefficient adults were intimately involved and in the appreciation of these relations the efforts of preventive medicine were being turned to some extent from the surroundings to the individual. Personal supervision of nursing had effected much in Huddersfield and the problem now was how to extend these advantages to all children. But it would be necessary that more should be known of the conditions of infants during the first month of life within which nearly one-third of the deaths in the first year occurred, yet the birth of an infant need not be registered until the end of 21 days in Scotland and 42 in England, so that the births of those who died in the first month were usually reported at the same time as the death, precluding all possibility of prevention. Dispensaries for nurslings had proved of great benefit in France and might be adopted here as a part of the wide field open for the philanthropic work of the local authorities which could not be covered by private charitable efforts. Local conditions, however, must determine the measures to be taken in each locality but information of all births must be given at a much earlier date; in fact, within a few days of the birth.—The President stated that in London 600 births were already reported by midwives to the County Council every week and that, adding all that occurred in, or in connexion with, hospitals, probably one-third of the total births would soon be notified within the first week. But registration of still-births ought to be adopted, for there was no doubt that some, though not so many as formerly, born alive but dying within 24 hours or so, were buried as "stillborn."—Mr. J. Broadbent, late Mayor of Huddersfield, said that in his town the payment of 1s. to the midwife had secured the prompt notification of about one-third of the total births, which was required in the first instance for the working of his scheme of premiums of £1 1s. for each infant born during his mayoralty and reaching the first anniversary of its birthday. In his district of Longworth the infant death-rate had, through the influence of a number of competent ladies who visited each family especially in illness, fallen from a ten year average of 122 to 65, and to 68 in the adjoining district which did not share in the bonuses. But the population consisted of the best class of sober, intelligent, and thrifty working men.—Dr. Sidney Davies thought that the high mortality in the earliest months of life was owing to antenatal conditions, as the growth of alcoholism among women, over which the health officer had no control.—Dr. P. Caldwell Smith also believed that social conditions alone would explain the extraordinary differences on which Dr. Chalmers had insisted, for the great improvement in the infant mortality in Glasgow synchronised with the sweeping away of a vast area of slums, the very worst in Great Britain. Like results had followed like changes in Liverpool, as Dr. Chalmers's diagrams showed, whereas in Aberdeen and Dundee there had been a great increase in the mortality, corresponding in the latter with a large extension of female labour. Deaths from immaturity should be kept apart from those due to developmental diseases; they were equally numerous in the wealthiest and the poorest quarters of his district, whereas those due to disease were overwhelmingly more so in the poorer. He lamented the want of a sense of responsibility among young mothers but found them as a rule willing to learn.—Dr. J. F. J. Sykes had come to the conclusion that the milk question was a secondary one in a highly complex problem. But whereas on the continent, especially in Germany, medical men encouraged mothers of all classes to nurse their infants for 18 to 24 months, in this country the bottle was resorted to on any pretext and medical advice was mainly directed towards finding the best substitute for the natural food. Illegitimate children were improperly fed from birth and consequently died earlier for the most part. The local authority should circulate leaflets to expectant as well as to actual mothers.—Dr. S. G. Moore considered that births should be registered within the first week, as they were on the continent, for by the twenty-first day it was too late to prevent the weaning of the infant, that having in most instances already been done. He did not believe that premature birth was half as frequent as alleged, being convinced that many deaths ascribed to immaturity were due to improper feeding, for which atrophy, debility, and "marasmus" were synonyms. He believed that two-thirds of the deaths of infants were preventable and that those in the first quarter were due to neglect arising in most instances from ignorance and apathy rather than from wickedness.—Mr. R. Musgrave Craven pointed out that the Liverpool of to-day was six times as large as that of 20 years ago by the inclusion of suburban districts.—Dr. W. Butler considered that provided an infant had milk alone the kind was comparatively of little importance, for certainly the proportion of the breast-fed was smallest in the upper classes who had the lowest mortality. The death-rate of illegitimate infants whose survival was not desired was four times that of the legitimate and he believed that a lesser degree of this sentiment was also prevalent in regard to all children, except in the homes of the agricultural labourers, whose low infant mortality rivalled that of the most advantageously placed. Girls in all classes of society in the pursuit of business, pleasure, or so-called education, from the day that they left school missed the opportunities of learning by the example of home the duties of wife and mother.—In reference to Dr. Moore's wish that crèches could be opened in or near the factories where women were engaged Dr. E. F. Willoughby remarked that this was a general practice in the cotton mills of India, where the mothers, as yet ignorant of "foods" and bottles, nursed their infants at stated hours during work.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on Feb. 16th, Dr. J. F. W. Tatham, the President, being in the chair.—Dr. Christopher Childs read a paper on the Epidemics of Typhoid Fever in the Camps of the United States Volunteers in 1898. In April of that year 100,000 men were assembled in their own States and in May they were drafted to national camps in several of the Southern States. More than a third of these regiments had cases of typhoid fever among them on their arrival and within ten weeks nearly every regiment had developed the disease. Between June and November among 107,973 men 20,738 were attacked and 1580,

or 14·63 per 1000 of the mean strength, died. In August a board of three medical officers was appointed to inquire into the causes and in 1900 an abstract was published of its report which, covering 2000 pages with 100 maps, plans, and charts, appeared in 1904. Among the conclusions at which they arrived were that while nearly every regiment was attacked about half the cases were missed or wrongly diagnosed by the regimental surgeons as ordinary diarrhœa, simple fever, or malaria, that infected water was not an important factor in the spread but that of 1608 cases carefully traced 62·3 per cent. were "connectable attacks"—i.e., due to infection within the tent or from an adjoining tent. Dr. Childs was so struck with this that he spent several weeks studying the documents in the Surgeon-General's library at Washington. The board visited all the camps between August 20th and Oct. 20th, and tabulated the reports of 92 out of the 118 regiments, the rest being incomplete. Impressed by the number of inaccurate diagnoses they obtained the assistance of experts capable of detecting the plasmodium of malaria and of applying Widal's test. Investigating the relations of intestinal disorders which they thought might, to some extent, have been cases of abortive typhoid fever they found that in 48 regiments, comprising 55,829 men, there were 9481 cases of diarrhœa and 7745 of typhoid fever, and that the proportion of those who had not been reported for diarrhœa who were attacked with typhoid fever was more than twice as great as that of those who had suffered from diarrhœa, whence they concluded that many of these cases had really been unrecognised typhoid fever. They were of opinion that the cases of diarrhœa occurring in June were due to errors of diet, for in four regiments the men who suffered from diarrhœa in July and August were seven times less susceptible to typhoid fever than those who had suffered in May and June. Taking the 1951 undoubted cases of enteric fever in 19 regiments he found that 174, or 8·9 per cent., had been preceded by diarrhœa of some kind, while 1777, or 91·9 per cent., had not. At Camp Alger suspicion fell on the water-supply which to the end of June had been drawn from shallow wells and streams, sometimes specifically polluted, but the amount of enteric fever was insignificant until the end of July when all the regiments having for a full fortnight enjoyed a pure supply from deep-bored wells, several active and widespread outbreaks appeared. Enteric fever burst out in the 2nd Division of the 1st Army Corps on their removal from Chickamauga Park to Knoxville, though they were supplied with the same water as the Tennessee Regiment in which no case had occurred during the two months it had been stationed there. But more striking than all was the case of the 7th Army Corps, having its headquarters at Jacksonville in Florida. In August the population of 30,000 and a like number of troops were supplied from a well 1000 feet deep, but while a few sporadic cases only occurred among the civil population, each of the three camps was sending over a score of men into hospital every day. No doubt the state of the camp and tents, the infected mud and dust, and flies constantly passing between the latrines and the men's messes contributed to the dissemination of the disease, but personal infection and, as a consequence, company epidemics, were highly characteristic. In most cases several occupants of a tent were attacked in succession and on one occasion 12 out of 54 men in the tents on one side of a "company street," or double line of tents, were attacked, those on the other side escaping entirely.—Sir Shirley Murphy remarked that though some cause acting generally, as an infected milk-supply, might set up the epidemic it was often kept up by personal infection long after the original cause had been withdrawn. Dr. A. Collie so long ago as 1872 maintained that it spread among nurses by personal infection in the Homerton Hospital, though, as he himself found, it did not in the Liverpool-road where they were all older women. It was frequent in the dwellings of the poor but much less so in the houses of the well-to-do.—Colonel J. Lane Notter said that in India there was little, if any, typhoid fever among troops on the move, the disease being practically confined to standing camps, garrisons, and blockhouses. A drawback in South Africa was the absence of lime from the soil. The use of badly preserved, if not of all preserved, foods conduced to dysentery and scurvy. These prevailed on board the *Discovery* in spite of lime-juice until all tinned foods were forbidden. In the Japanese army during the war there was practically no typhoid fever or dysentery, but with their non-nitrogenous diet there was a remarkable absence of offensiveness in their latrines and from their persons.—Dr. E. W. Goodall remarked that Dr. Collie was not the first to maintain personal infection, for he referred to French and other observers before him. The worst year in his own experience at Homerton was one in which they had an unusual proportion of young nurses. The diarrhœa that conferred immunity was no doubt mild or masked enteric fever but, as Reincke of Hamburg had pointed out, the infection of diarrhœa with a short, and that of enteric fever with a long, incubation might be received together and be developed in succession.—Dr. H. T. Bulstrode read a letter from Dr. Collie stating that when he was at Aberdeen in 1861 typhoid fever was not recognised but at Dundee in 1864 it was kept in a ward by itself and no nurses were allowed to attend who were under 40 years of age.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 2nd, Dr. J. Lindsay Steven, the President, being in the chair.—The President showed a specimen of a Round-celled Sarcoma of the Brain, situated in the frontal lobes and beginning with mental symptoms. The tumour occupied the entire anterior part (prefrontal region) of the right frontal lobe and had extended across the anterior portion of the corpus callosum so as to invade the left frontal lobe. The growth was soft and in some places diffluent; it was not clearly demarcated from the surrounding brain tissue and had no trace of a capsule anywhere. At some points of the right frontal lobe it had caused adhesion to the dura mater. On microscopic examination it was found to be composed of fairly large round cells without stroma and with distinct microscopic hæmorrhages throughout its substance. Microscopic sections of the tumour were shown. The patient was a man, aged 49 years, who had been admitted to the Glasgow Royal Infirmary on Sept. 27th, 1905. He had been quite well till July, 1905, when mental changes were first of all noted by his friends and were attributed to family bereavement. He became facile, dull, and forgetful, so that not only his relatives but his fellow workmen noted the change in his mental condition. About the beginning of August he began to complain of severe frontal headache of paroxysmal kind and shortly after this attacks of vomiting and vertigo set in. On admission the headache was still severe and the vomiting was occasional; the vertigo and frontal pain set in whenever he assumed the erect posture; he was facile and unable to concentrate his attention and there was marked double optic neuritis. On Oct. 2nd the following note was recorded in the ward journal: "The paroxysmal headache, the vertigo, the mental alteration, and the double optic neuritis all point to the presence of a cerebral neoplasm. There are, however, no focal symptoms by which it can be localised. The absence of ataxia, on the whole, rather excludes the cerebellum and perhaps the frontal character of the headache might indicate a locality in the frontal lobe." The patient died on Jan. 2nd, 1906.—Mr. A. E. Maylard said that psychical symptoms contra-indicated operation. Trephining for the relief of pressure was seldom advisable as there was great danger of a hernia cerebri. He referred to a case where he had successfully removed a round-celled encapsulated sarcoma from the frontal lobe. The symptoms had been of an irritative character.—Dr. L. R. Oswald thought it a misfortune that the surgeon took this view. He thought they might do more for such cases. In his experience, when the frontal area was affected there was weakness rather than perversion of the mental faculties and tumours of the brain with mental symptoms were generally situated in the middle and posterior parts of the brain.—Mr. H. Rutherfurd said that the absence of localising rather than the presence of mental symptoms deterred the surgeon. Lumbar puncture had the advantage over trephining for the relief of pressure in that drainage could be continued if desired and it avoided the risk of a hernia cerebri.—The President thought that the subject was one of great difficulty to surgeons and that they were doing everything that was possible. He did not agree with Dr. Oswald when he said that his case presented no mental symptoms.—Dr. J. W. Findlay and Dr. R. M. Buchanan reported a case of Typhoidal Cholecystitis. The patient, aged 51 years, had 25 years previously suffered from what was probably typhoid fever. She came under observation with high fever, which fell by lysis much after the manner of defervescing enteric fever, a distended gall-bladder, and a history of indisposition

of two months' duration. None of the physicians who saw her at this time considered that she was actually passing through an attack of enteric fever. Her blood gave a marked positive Widal's reaction with a dilution of 1 in 50 within an hour; leucopenia was present. Typhoid bacilli were isolated from the fæces. Cholecystotomy was performed by Mr. Rutherfurd, and pus and gall-stones were removed. From the pus was isolated the typhoid bacillus in pure culture. The bacillus isolated from the pus, as also from the fæces, conformed to all the cultural tests and morphological characters of the bacillus typhosus, and the specificity of the organism was confirmed by the agglutination test. 16 days after operation typhoid bacilli were as numerous in the discharge from the gall-bladder as they had been in pus removed at the operation, and it took a further three weeks of daily douching, with 1 in 40 carbolic solution, to rid the gall-bladder of typhoid bacilli. The patients died nine weeks after operation from cardiac failure, aggravated, if not indeed caused, by severe flatulent distension of the abdomen, of unknown cause.

FORFARSHIRE MEDICAL ASSOCIATION. — A meeting of this society was held at Dundee on Feb. 1st, Dr. R. Sinclair, the President, being in the chair.—Mr. D. M. Greig exhibited two patients after operation for the radical cure of Varicocele and Hydrocele. The first case was that of double varicocele operated upon a few years ago which showed the satisfactory result of the operation described by Mr. Greig in the *Scottish Medical and Surgical Journal* for September, 1898. The second case was one of hydrocele of long standing which had been tapped 12 times and now showed the good result obtained by the operation of evagination. Mr. Greig also showed a cast from a case of Congenital Talipes Calcaneo-valgus.—Professor A. M. Stalker showed a specimen of Perforating Ulcer of the Stomach with a cicatrix close to it of a former old healed ulcer. He also exhibited a specimen of Cancer of the Liver with a nodule at the biliary papilla.—Dr. G. A. Pirie showed radiographs of the Thorax in health and disease, including several cases of tubercle of the lung in various stages, carcinoma of the mediastinum with displacement of the heart, and hypertrophy of the heart.—Professor J. A. C. Kynoch read notes on three cases of Labour complicated with Carcinoma of the Uterus. Two of the cases were not seen until a few weeks after confinement; examination discovered advanced cancer of the cervix, and vaginal hysterectomy was performed. The third case was seen in labour, which was a breech presentation, and hysterectomy was performed ten days after. Professor Kynoch stated that the condition, though somewhat rare, was very important from the point of view of treatment when discovered during pregnancy. He considered that if the trouble was detected before the sixth month immediate removal of the uterus without regard to the fœtus was best. If discovered later than that and the disease was extensive it was best left alone. The results in any case were unfortunately very unsatisfactory.—Mr. A. Don read a paper on the Diagnostic Value of Radiography in Fractures. He explained that the object of the paper was to bring out the value of radiographing all obscure and difficult bony lesions both before and after putting them up in splints or otherwise. By such means only could the best possible results be obtained and the surgeon would be saved the ignominy of having failed to diagnose and properly to treat a fracture and possibly having to defend his work if an action for damages was brought against him. The surgeon should therefore be able to read a radiogram correctly when the details of the taking of it were given him. How necessary was it to know the details was illustrated by a series of radiograms showing distorted views of accurately set fractures and radiograms of fractures which completely obscured the lesion. The blurring effects of secondary and adventitious rays was shown and explained as was the production of these rays. It was also shown how dense muscular tissue or blood clot and the overlapping of bones in joint lesions were apt to hide fractures unless the best position for taking the radiogram had been first ascertained by a thorough examination with the fluorescent screen. The medico-legal aspect of radiography was considered and it was thought advisable that only experts should give an opinion in courts of law from a radiogram alone.—In the discussion which followed Mr. Pirie agreed with Mr. Don and suggested that lengthened exposure of the plate would do away with many faults such as overlapping.—Mr. G. Halley emphasised the importance of getting a picture from various points of view.—Mr. Greig stated that the value of radiography could not be over-estimated in the diagnosis and proper treatment of fractures; and in every case of fracture he would like to get a radiogram before, during, and after treatment. Many an injury was missed if no radiogram was obtained. He considered that x ray photography was to revolutionise the classification of fractures, and many injuries of bones, especially of the phalanges, which had previously been looked upon as bruises or "staves," would in the future be found to be in reality fractures. The so called typical Colles's and Pott's fractures would now require to be subdivided. He agreed that it was absurd for a judge in a court of law to give an opinion or to decide an action on a radiogram alone. He hoped before long that more satisfactory photographs of calculi in the kidney, ureter, and bladder would be obtained.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Feb. 8th, Mr. F. Bowreman Jessett, the President, being in the chair.—Dr. Bedford Fenwick exhibited a specimen of a Pregnant Uterus complicated by Fibroid Tumours. The patient was 36 years of age and had been married four and a half months. The menstrual periods commenced at 12 years of age and were always regular, lasting four days, but were below the normal amount. During the last year or two she suffered from increasing constipation with pain or frequency of micturition. The last period terminated on Sept. 6th, 1905, since which time there had been increasing pain on the left side and swelling of the abdomen. When seen by Dr. Fenwick there were two nodular masses above the pubes and the pelvis was filled by a densely hard nodular mass which could not be moved. The cervix was drawn up behind the pubes and felt soft and the vagina was discoloured. The breasts were enlarged and secreting. The pulse rapidly increased in frequency and pain became more severe. On Jan. 16th, 1906, supravaginal hysterectomy was performed when the lower mass was found firmly moulded to the pelvis and the cervix so compressed that it was doubtful whether a full-term child could be brought through.—Dr. H. Macnaughton-Jones showed a specimen of Vaginal Cyst removed from a patient, aged 35 years, who was married but had never been pregnant. She had complained of symptoms of endometritis for which curettage was performed in September, 1905. A note of the case will be found on p. 513 of this issue of THE LANCET.—Dr. J. A. Mansell Moullin showed three specimens of Uterine Myomata. The first was a portion of a multi-nodular tumour removed from a patient, aged 53 years; it had undergone calcareous degeneration and caused pain and discomfort for two years. The second was a calcareous tumour with an artificial opening in the wall showing the tumour to be a calcareous shell with mucoid contents. This tumour was entirely detached from another larger one removed at the same time. The third specimen was a soft submucous myoma removed from an unmarried patient. The tumour extended up to the umbilicus and caused inconvenience by its size.—The President then delivered his inaugural address on Cancer of the Uterus. He said that out of a large number of cases which presented themselves at the Cancer Hospital operation was justifiable in only a very small proportion. This was chiefly due to delay in seeking advice and also to the want of a thorough examination whenever the least suspicion of malignant disease existed. He did not approve of leaflets being issued broadcast with an account of the symptoms and results of cancer, because unnecessary anxiety was thereby caused. He directed attention to the rapid progress of cancer after labour and abortion and suggested that these factors might play a larger part in etiology than was generally supposed. There was little difficulty in recognising cancer of the vaginal portion of the cervix and the treatment was high amputation or vaginal hysterectomy. When disease of the body of the uterus was diagnosed sufficiently early there was every prospect of a successful result, but there was a difficulty here as there might be either no symptoms or only a slight increase in the menstrual flow with elongation of the body. In these cases pathological findings might not always show the existence of cancer and when scrapings from the uterus were examined he would advise that a report of the condition of the patient should also be sent. The treatment of this form was vaginal hysterectomy, which might be advised with every prospect of success. Cancer of the cervical canal was the most unfavourable as it commenced in the glandular portion and rapidly progressed, so that the surrounding tissues were frequently involved before the disease was diagnosed. The treatment of these cases was

either high amputation or combined vaginal and abdominal hysterectomy. Infection of the lymphatics did not exist at all to the extent frequently supposed and was found most often when the disease was in the cervical canal. When the uterus was fixed, with ureters and bladder implicated, very little could be done to benefit the patient, although he admitted that borderland cases existed which would be benefited by some such operation as Wertheim's. He had found that the paravaginal incision on several occasions assisted in exposing the structures in the parametria and had practised it for some years.

ROYAL ACADEMY OF MEDICINE IN IRELAND: SECTION OF OBSTETRICS.—A meeting of this section was held on Feb. 2nd, Dr. R. D. Purefoy, the President, being in the chair.—Sir Arthur V. Macan exhibited a specimen of Degenerated Uterine Fibroid. On section the tumour gave evidence of being an ordinary fibroma. This form of red degenerative change was said usually to begin in the centre of these tumours. They were liable to be coloured and to slough.—Dr. Alfred J. Smith exhibited a specimen of a Myomatous Uterus undergoing Sarcomatous Degeneration. The patient was about 45 years old and was married but had no family.—Dr. Henry Jellett showed Two Carcinomatous Ovaries and a Uterus removed from a patient, aged 47 years. The tumours were so fixed in the pelvis that at first sight their removal appeared impossible, but on making a transverse incision from the centre of the usual mesial incision outwards towards the left anterior superior spine, it became possible to pass the fingers below the left ovary and so to work across the pelvis to the right. The broad ligaments were so infiltrated that it was impossible to tie them and the uterus was in consequence removed, hæmorrhage being controlled by two clamps passed upwards from the vagina. There was a large collection of very foul pus in Douglas's pouch and from this an infection of the abdominal wound resulted. The patient, whose pulse-rate at the end of the operation was 160, made an uneventful recovery, save for the wound infection. At the present time, six months after the operation, she stated that her health had been good and that she had gained in weight. There was, however, some reason to believe that a return was taking place in the tissues round the rectum.—Dr. Jellett also showed the Remains of an Extra-uterine Fœtus removed from a patient who had been pregnant 18 months before the operation and who had believed that she had miscarried. No ovum, however, was seen at the time and the condition of the removed fœtus made it probable that it had been retained since the supposed miscarriage. The fœtus was aged about four and a half months.—Mr. J. Spencer Sheill read a paper entitled "Sequel to an Attack of Eclampsia." The patient, a young primipara, had had her left kidney removed three years previously for tuberculosis. She suffered from eclampsia in March, 1905, when about five and a half months pregnant. She had seven seizures which caused the death of the fœtus. Her uterus was emptied by the induction of labour and her recovery was rapid and complete. She again conceived, and on examination early in July, 1905, was found to be two and a half months pregnant. In December albumin made its appearance in the urine and in January, 1906, when she was within about a month of term, owing to the onset of symptoms which indicated the near approach of eclampsia, induction of labour was performed and she was delivered in 18 hours of a living child. A few hours later she had a typical eclamptic seizure and was successfully treated. Mr. Sheill asked whether it would not be for the good of everyone concerned that a woman who was liable to attacks of eclampsia should be rendered sterile by the operation of tube tying?—Mr. Andrew J. Horne said that removal of the ovaries was more advisable and he mentioned two similar cases in his own experience.—The President said that he was opposed to the artificial production of sterility.

NEWCASTLE-UPON-TYNE CLINICAL SOCIETY.—A meeting of this society was held on Feb. 1st, Dr. W. Hardcastle, the President, being in the chair.—Mr. T. G. Ouston showed a child, one year and eight months old, from whom he had removed the whole of the right sterno-mastoid muscle as it was the seat of a fibrifying spindle-celled sarcoma. There were now no sign of growth and no visible deformity.—Mr. George Foggin showed three Ophthalmic Cases. The first patient was a boy, aged 15 years, suffering from Congenital Double Aniridia associated with Cataract. The second was a girl, aged nine years, suffering from Double Congenital Microphthalmos and cataract. The third was a man, aged 28 years, suffering from a Recurrent Growth on the Conjunctival Surface of the Right Upper Eyelid. The edge of the lower lid near the inner canthus had for years been the seat of a so-called "mould mark" and at intervals this had been touched with silver nitrate by the patient's medical attendant. Hæmorrhage had occurred frequently from the "mould mark" as well as from the growth. Profuse hæmorrhage occurred when the growth was removed. Microscopically it was reported to be epithelioma. Six months later it recurred, the pre-auricular gland was much enlarged, and the malignity of the growth seemed proven, but after a second removal there had so far been no recurrence and the enlargement of the gland had disappeared.—Mr. S. S. Whillis showed a child, aged one and a half years, whose internal carotid arteries he had tied nine months before for hydrocephalus. At the time of the operation the head was 21½ inches in circumference; it was now 23 inches; in all other respects the condition was unaltered.—Mr. G. G. Turner showed a man who had a carious tooth removed three years ago. There was an abscess at the root and the cavity was packed regularly by a dentist. It was two and a half years since the last visit to the dentist and a sinus had continued in the upper jaw ever since. A piece of spongiopiline was removed, after which the sinus promptly healed.—Dr. H. Smurthwaite showed a girl, aged seven years, with well-developed Papilloma in the Larynx.—Mr. John Clay showed a boy, eight years of age, with Double Talipes Equino varus of Central Origin in whom Babinski's sign was very well developed.—Dr. R. P. Ranken Lyle showed a patient who suffered from the "habit of abortion." She had miscarried at seven, six, and seven months and had never had a living child. From the time that she knew she was pregnant she had been treated with chlorate of potassium.—Mr. J. W. Leech showed a case of Sarcoma of the Thigh and two cases of Epithelioma of the Mouth.—Mr. Leech also showed an arm which had been amputated at the shoulder-joint for Acute Spreading Gangrene. The patient was a boy, aged 15 years, who was shot in the forearm at close range three days before the operation. The gangrene had spread to the chest where the tissues were emphysematous. Recovery was uninterrupted.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held on Feb. 14th, Dr. M. Mackintosh, the President, being in the chair.—Mr. D'Arcy Power read a paper on the Diagnosis and Treatment of Cancer of the Large Intestine. He said that the sole hope of successfully treating cancer lay in the early recognition and complete removal of the growth. There were, however, two obstacles to the early diagnosis of cancer of the large intestine. In the first place, the symptoms were very slight, and in the second place they simulated those produced by more common and very trivial conditions. Slight but recurrent attacks of constipation followed by diarrhœa, symptoms of indigestion with much flatulence, the sudden appearance of piles without any known cause, loss of weight, and indefinable malaise in a person of cancerous age should lead the general practitioner to make a thorough examination of the abdomen. Cancer of the large intestine grew slowly and for a long time was strictly localised. It killed in the earlier stages by the mechanical effects due to constriction of the bowel—in other words, by toxæmia due to the absorption of the products of intestinal fermentation rather than by ulceration, perforation, or the implication of the vital organs. As long as the bowels were regularly opened the patient remained in good health and often in ignorance of his condition, but there came a time when from some slight cause acute obstruction occurred. A purgative should not be given blindly; the abdomen should be carefully examined and a lump was sure to be found. This would prove to be a mass of fæces arrested at a point in the large intestine where there was narrowing but not complete occlusion of the lumen. The patient should be put to bed, kept warm, and rigorously starved. The lower bowel should be emptied by copious enemata and the stomach should be washed out by means of the stomach tube if vomiting was troublesome. These measures would soon give relief and when the bowels had begun to empty themselves and the attack was passing off a full dose of castor oil might be given. A fresh attack of obstruction might be postponed by careful attention to diet and by keeping the bowels gently relaxed; but the patient

should at the same time be warned that these means were purely palliative and that he ought to seek surgical advice with a view to an exploratory operation. It was very possible in an early stage that the growth would be found to be capable of easy and safe removal. It might, on the other hand, have contracted such adhesions as would make it desirable to short-circuit the affected piece of intestine. At the worst a timely colotomy would prolong the life of the patient in comparative comfort and would free him from the risk of intestinal obstruction. When a colotomy was proposed the subsequent existence of an artificial anus should be explained, as some patients complained afterwards that they were ignorant of this result of the operation.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Sheffield on Feb. 16th, Mr. R. Favell, the President, being in the chair.—Mr. A. W. Cuff (Sheffield), after referring to the work of Bumm, Bruns, Haeckel, and Trendelenburg, recorded a case of subacute pyæmia following confinement in which rigors occurred for three weeks, the temperature ranging between 98° and 105° F. and the patient steadily declining. Tumefaction of the right broad ligament being felt, the abdomen was opened and a mass composed of thrombosed veins and œdematous connective tissue was isolated by double ligature. The ovarian vein was thrombosed up to the lower border of the kidney and was ligated close to its junction with the inferior vena cava. The patient made a steady recovery and had no rigors after the operation though the temperature twice rose to 102° before becoming normal 11 days later. This was the seventh successful case of the kind on record.—Dr. H. Briggs (Liverpool) and Dr. J. H. Willett (Liverpool) showed two Fibroid Uteri the cavities of which contained polypi. One of these was shown to be a large round-celled sarcoma of the endometrium, while the other was an adeno-carcinoma of the same origin with secondary deposits in the ovary.—Dr. A. Donald (Manchester) showed a mass of Fibromyomata, one of which had necrosed and become adherent to the abdominal wall and to the bowel, thus causing intestinal obstruction of several days' duration. He also showed a Uterus with Fibromyomata, one of which occupied the uterine cavity and had first caused bleeding at the unusually advanced age of 64 years.—Dr. A. W. W. Lea (Manchester) showed a Myomatous Uterus of the size of a football the cavity of which contained an ovum of six weeks' growth. There were no symptoms until pregnancy occurred. He also showed a Uterus at the seventh month of pregnancy with a Multiple Myoma, removed on account of intense pain, dysuria, and painful defæcation.—Dr. W. Blair Bell (Liverpool) showed a Growth of the Uterine Wall which consisted largely of arteries the walls of which had undergone hyaline degeneration and which could only be described as an angiomatous fibro-myoma uteri. Dr. Bell also showed a Retroperitoneal Tumour removed from the iliac fossa which proved to be a renal growth of the variety known as hypernephroma and derived from suprarenal rests included within the kidney.—Dr. W. Walter (Manchester) showed two specimens of Ruptured Ectopic Gestation removed by abdominal section at the sixth and eleventh weeks. In each case sudden pain preceded fainting and in the first marked pulsation of the uterine artery aided the diagnosis.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Feb. 16th, Mr. W. Campbell M'Donnell, the President, being in the chair.—Mr. Peter L. Daniel read a paper on Osteo-arthritis in Disguise—i.e., its frequently misleading manifestations, such as sciatica, hallux valgus, flat-foot, &c., which he illustrated by numerous excellent skiagrams. He said that all forms of disintegrating joint trouble not due to a specific cause were osteo-arthritic. Their manifestations were uniform degenerative changes in the cartilage and surroundings of joints due to underlying chronic osteitis. Just as in rheumatic arthritis the poison was introduced *viâ* the sore-throat and in gonorrhœal arthritis *viâ* the urethra, so in a patient with severe gastro enteritis, or suppuration, or some chronic disease they might find joint affection, for a synovial membrane could be influenced by any toxæmia in the body. The moral was to see that all the orifices of the body were healthy. The knee was the least protected and most exposed joint; hence if damaged by injury it was easy for it to become osteo-arthritic, due to toxins absorbed from some part of the body. Sciatica was in most cases due to disease of one of three joints—the hip, the sacro-iliac, or the small ones of the lumbar spine. In the chronic variety of sciatica no disease had been found in the nerve itself either microscopically or chemically, while skiagrams almost always showed some joint affection. So-called internal derangement of the knee-joint was mostly due to osteo-arthritis and another manifestation was the formation of loose bodies. Flat-foot in adults was nearly always associated with an osteo-arthritic change in the small joints of the tarsus, thereby causing a flattening of the arch. Bunion was another manifestation and its treatment was massage and passive exercise. Lumbago was often the result of disease of the sacro-iliac or vertebral joints and slapping the back did good, as it separated some adhesions.—The President showed a man, aged 62 years, with a Growth on both Vocal Cords.

KIDDERMINSTER MEDICAL SOCIETY.—A general meeting of this society was held at the infirmary on Feb. 9th, Dr. O. C. P. Evans, the President, being in the chair.—Mr. A. C. Oldham read an interesting paper on Exophthalmic Goitre, in which he dwelt chiefly on the treatment of the disease. He illustrated the paper with several cases that had been recently under his care. At the conclusion of the paper a discussion ensued.—Mr. J. L. Stretton showed: 1. A man, aged 27 years, who had a Dislocation of the Right Ulnar Nerve which had been successfully fixed in position by mattress sutures. 2. A man, aged 19 years, whose External Popliteal Nerve was sutured after its division three weeks previously by a bill-hook. 3. A girl from whom he had excised a Malignant Pustule of the Cheek. It was injected with 40 cubic centimetres of Sclavo's serum. 48 hours later her condition was alarming and the dose was repeated with most satisfactory results. 4. The Head of the Cæcum with Appendix and Four Inches of Intussuscepted Ileum. 5. A Vesical Calculus removed from a pouch behind the prostate. 6. Superior Maxilla removed for carcinoma from a man aged 42 years.—The President exhibited a man from whom he had removed a large Epithelioma of the Lower Lip. The lip had been repaired by a plastic operation which involved the transplantation of a piece from the adjoining cheek.—Dr. Bertram Addenbrooke showed a boy, aged six months, who had suffered from Intussusception of 36 hours' duration, the ileo-cæcal valve being the apex of the intussusciplens which could be felt digitally per rectum. Abdominal section was performed, the bowel was reduced, and the child made an uninterrupted recovery.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Feb. 14th, Professor J. Lorrain Smith being in the chair.—Dr. W. E. Fothergill exhibited, and read a short note on, a specimen of Ovarian Hæmatoma.—Dr. John Cameron contributed a paper on a Comparison of the Behaviour of the Cell Elements of Cancerous Tumours with that of the Cell Elements of Normal Embryonic Tissue, illustrated by a series of lantern slides prepared from micro-photographs. From a cytological study of these two forms of tissue, and more particularly of the nuclear changes, it was possible that the so-called parasites of cancer might be the results of cytological changes in the cell nucleus. He also referred to the existence of ferment substances in embryonic tissues and pointed out the possibility of such substances being present also in cancerous tumours. If this were so they might account for some of the local and constitutional effects met with in patients who were the subjects of this disease.—Other specimens were exhibited as card specimens.

BRISTOL NATURALISTS' SOCIETY.—The forty-third annual meeting of the Bristol Naturalists' Society was held at University College, Bristol, on Jan. 24th, Dr. A. B. Prowsé presiding. Mr. C. K. Rudge, M.R.C.S. Eng., the President, gave an interesting address, entitled "The Harvest of the Sea."

UNIVERSITY OF ST. ANDREWS.—At the graduation ceremony on April 3rd the Senatus Academicus has resolved to confer the degree of LL.D. on Dr. W. Barrie Dow of Dunfermline who has been an assessor of the general council on the University court for 12 years, and on Dr. Robert Sinclair of Dundee, a member of the council of University College, Dundee.

Reviews and Notices of Books

Report on the Surgical Cases noted in the South African War, 1899–1902. Edited by Surgeon-General W. F. STEVENSON, C.B., K.H.S., A.M.S. London: Harrison and Sons. 1905. Pp. 308, with many plates. Price 7*s.* 6*d.*

THIS report is the work of a committee; the names of the committee and the different parts of the report for which they are severally responsible are as follows: Surgeon-General Stevenson, Injuries of the Head and Spine; Lieutenant-Colonel G. H. Sylvester, Injuries of the Blood-vessels and Nerves; Major Mallins, Injuries of the Abdomen and Genitals; Brevet Lieutenant-Colonel S. Hickson, Injuries of the Long Bones and Joints; and Major M. P. Holt, D.S.O., Injuries of the Chest and Neck. In the South African war the surgical casualties nearly reached a total of 23,000, but this report is only founded on 1650 cases, of which number the notes were sufficiently full to be of value. In consequence of this the editor is careful to point out that the statistics published in this work only represent the results which may be arrived at from the study of the limited number of cases available, and that the figures may have to undergo material changes when all the data derived from the field hospitals shall have been taken into account.

The first section deals with Wounds of the Head and it is stated that the injuries to the skull were much less severe than had been anticipated from experiments on the cadaver. Although some wounds received at a range up to eight or ten yards resulted in great disruption of the bones, yet, even at these ranges not to the extent that was predicted. Wounds received at a range over 100 yards differed little from those received at a much greater distance. On the other hand, wounds received by bullets at extreme range sometimes showed greater destruction than those received at a less distance. This is attributed to the wobbling of the bullet at the end of its flight. Perforating wounds of the head are much more dangerous in the posterior than in the anterior part of the skull and danger to life increases the nearer the bullet track approaches the base. Two interesting cases of lesions of the occipital lobe are noted, in both of which vision was reduced to the perception of light, as well as several cases showing the liability to abscess formation after wounds of the head although an interval of several months may have elapsed since the receipt of the injury.

If wounds of the head are divided into gutter, perforating, and penetrating, it would appear from the 133 cases available that penetrating wounds are the most dangerous and that the gutter fractures are the least so. The treatment advised in the cases of injury to the head is rest, maintaining an aseptic condition of the wound, and the use of operative interference at an early date when indications showing its necessity are apparent—that is, when a bone is implicated, even to a slight degree. Practically all deaths which occurred in these cases at a later period than two or three days after admission were due to septic meningitis, to hernia, and to abscess of the brain. On the whole it is considered that the results of operative treatment of injuries to the head were satisfactory but it is pointed out that before the details of injuries treated in the field hospitals are received no definite statement can be made about the actual mortality of gunshot injuries to the head.

In the section treating of Gunshot Injuries to the Spine the most interesting fact brought forward is the grave injury that can be done to the spinal cord, even though the bullet has passed at some distance from this structure. It is pointed out that in several cases the spinal cord has been reduced to a custard-like consistence, which, so far as transmission of impulses was concerned, was equal to a total lesion of the cord. The opinion is therefore expressed that operative interference, such as laminectomy, is useless unless there is some indication that the spinal column is not functionally completely severed. The indications for operation are the existence of signs of spinal irritation, pains due to depressed bone, meningeal hæmorrhage, or the lodgment of a bullet in the vertebral canal. Some good illustrations of spinal injury are given, and the one of special interest is a spinal cord one section of which has been reduced to a pulp although there was no sign that the bony column had been injured by the bullet.

The section on Penetrating Wounds of the Abdomen is of peculiar interest to all surgeons in view of the still disputed point as to whether a bullet can cross the abdominal cavity without penetrating the intestines which lie in its path. The writer of the article is of the opinion that those who state that a bullet can cross an intestinal area of the abdomen without perforating the intestines have not proved their case. He attributes the absence of symptoms to the fact that the bullet has not penetrated the abdomen, although the entrance and exit wounds would lead to this supposition, or to the fact that the small perforation becomes quickly sealed. He also points out the difficulty of drawing conclusions from the appearances found at operations or post-mortem examinations made on patients some time after a gunshot wound of the abdomen; under the conditions met it is extremely likely that the small hole is overlooked amidst the mass of adhesions usually present.

Details of 207 penetrating wounds of the abdomen are given and of these 143 recovered. In 40 per cent. of these a diagnosis of visceral lesion was impossible on account of the absence of symptoms. Cœliotomy was performed 26 times with 18 deaths, a mortality of 69·2 per cent. Most of these operations were performed after the onset of peritonitis. This result is sufficiently gloomy but the editor states that he has reason to believe that the actual results were even worse. The successful cases were as follows: resection (primary, six and 12 hours' interval respectively), two cases; suture of intestine, two cases; colostomy, one case; enterostomy for obstruction, one case; and irrigation and drainage, two cases. The treatment favoured in these cases is an expectant one, operation only being advised when signs of peritonitis or hæmorrhage declare themselves. Primary operations in field hospitals under the adverse conditions generally found can but lead to disastrous results. As most of the operations were only undertaken for resulting peritonitis there does not seem much hope for the future. Many cases had to be transported at the very time when careful observations for the onset of peritonitis were most urgent and unless arrangements can be made to treat such cases near the spot where they fell the mortality is likely to be heavy. Internal hæmorrhage does not seem to have been very frequent in those cases that reached the stationary hospitals. It is stated that in the 207 cases it occurred 25 times. In the table giving details of the operations mention is not made of interference with this object but two cases are referred to in the text.

The section devoted to Injury of Bones is copiously illustrated with skiagrams and reproductions of photographs of the resulting injuries. The disruptive effects produced by an intact high velocity bullet are stated to occur up to a range of 200 yards and to be especially obvious when the shaft of a long bone is penetrated through its medullary cavity. The size of the exit wound largely depends upon whether the bone hit is subcutaneous or buried in soft parts. Perforation of the expanded ends of bone was the rule but instances are also quoted of perforation of the compact tissue of the shaft, though this injury was comparatively rare. Dealing with wounds of joints it is pointed out that the cases, as a rule, did exceedingly well and required little beyond the application of the first dressing. The comparative triviality of a

wound of a joint is well shown in the statistics relating to the knee-joint where 95 cases are quoted, of which only four died, being a mortality of 4·2 per cent. The four fatal cases died as the result of shock following amputation for septicæmia. Attention is also drawn to the fact that synovitis of a joint may follow a wound in its neighbourhood although the joint is not itself penetrated.

Of all the injuries studied in the South African war none were of greater interest than those of the blood-vessels and it certainly was a surprise to most surgeons to see undoubted perforation of large vessels followed by so little hæmorrhage. Primary external hæmorrhage on the field of battle or in the field hospitals was seldom fatal; certainly it was of rare occurrence in the stationary hospitals. Of secondary hæmorrhage there are only 20 cases noted and they all occurred in septic wounds. Two tables are given as showing the result of ligature of the vessels in the wound and of proximal ligature. The former had a death-rate of 25 per cent. and the latter of 36·3 per cent., and although the numbers are small they seem to show that the more modern treatment of ligation in the wound is a better practice. Two cases of obliteration of vessels are noted. In the first the bullet entered below the clavicle at the junction of the outer and middle thirds and left the body between the ninth and tenth ribs of the same side just outside the erector spinæ. There was no axillary pulse when examined 14 days later. The second case showed an entrance wound at the angle of the scapula and an exit wound below the outer end of the clavicle. There was no brachial pulse a month after the injury.

63 cases of traumatic aneurysm are considered—45 of the diffuse and 18 of the circumscribed variety. In 61 cases ligature was practised and in two amputation without ligature. There were 33 cases of veno-arterial communications; 27 were treated by ligature and one by primary amputation. Attention is drawn to the irritable condition of the vascular system in these cases and it might have been added that pulsation in the veins was much less frequent than the text-books would lead their readers to expect. Some of the results of treatment of aneurysm of the limbs are as follows:—

	No.	Died.	Gangrene.	Amputation.
Diffuse aneurysm—				
Ligature, at site	27	0	0	1
Ligature, proximal	16	0	1	1
Circumscribed aneurysm—				
Ligature, at site	4	0	0	0
Ligature, proximal	14	0	0	1
Veno-arterial communications—				
Ligature of artery and vein, proximal and distal	4	0	0	0
Ligature of artery, proximal	14	2	8	8
Ligature of artery, proximal; vein, distal and proximal	1	0	0	0
Ligature of artery, proximal and distal; vein, distal	1	0	0	0

Much doubt has existed as to the proper treatment of a veno-arterial communication and one significant fact brought out by the tables is the frequent occurrence of gangrene after a proximal ligature of the artery, whether this ligature was applied early or late or in the upper or lower limb (there were ten cases of Hunterian ligature with five cases of gangrene and four cases of Anel's operation with three cases of gangrene).

Under the heading of Injuries to Nerves the question of contusion versus concussion is discussed and it is thought that such a thing as concussion exists, although the opinion of Civil Surgeon A. Young is quoted as against this theory and a paper by this observer on the subject is appended at the end of the volume. Surgeon-General Stevenson regards this question as simply an academic one but concludes that "concussion" can produce an injury of the nerve sufficient to stop the passage of impulses. It is hard to say in what consists the difference between "concussion" and "contusion." The nerve must be injured with the passage of vibrations through the tissue intervening between the bullet track and the nerve and these vibrations must, it seems, resemble rapidly repeated blows. In order to prove "concussion," using the term in its usual sense, the absence of all lesions, except molecular ones, would have to be proved, and even here it is quite possible that such changes themselves are set up by vibratory blows. The question is also of interest when reference is made to the pulping of the spinal cord caused by the passage of a bullet at some distance from this structure and it seems that the two cases are really on a level. The prognosis of nerve injuries is stated to be by no means good as regards complete recovery and operative interference did not afford so hopeful an outlook as was formerly supposed.

In the section dealing with Injuries to the Chest the possibility of penetration of the heart without obvious symptoms is discussed. It is pointed out here that the same difficulty exists in judging of wounds of the heart from the situation of the entrance and exit wounds as is met with in judging as to the likelihood of wounds of the intestine, and it appears that, without denying the possibility of such an event, the author is doubtful of its occurrence. As regards wounds of the lung the symptoms vary in a great degree. Some men after being hit through the chest collapse entirely, while others have been known to walk or to ride long distances, sometimes many miles. External hæmorrhage was distinctly rare but hæmothorax was present fairly frequently and this complication necessitated surgical interference more often than any other. Pyothorax was a very rare complication and perhaps it would have occurred still less frequently but for over-anxiety to remove retained bullets. Dyspnœa was present in a fair number of cases and as a rule disappeared after the seventh day, but in certain cases it persisted quite apart from any compression of the lung by fluid.

The whole report is interesting and worthy of close study not only by surgeons whose life is spent with an army but by those in civil practice. There would be no great difference between military and civil practice as far as the actual treatment of any given injury was concerned if the conditions met with in war were the same as those pertaining to hospital practice. On active service, however, the environment of the patient is so altered that the treatment must be greatly modified. Take, for instance, the treatment of a perforating gunshot wound of the abdomen. In hospital practice few surgeons would hesitate to explore the wound and to open the abdomen. Under service conditions all is altered. The number of wounded, the absence of water, the state of the weather, and the necessity of rapid removal modify or completely change the attitude of the surgeon. What would be the salvation of the patient under one condition would mean his death under the other. If this report brings these facts home to the civil surgeon it will have done a great work. The Royal Army Medical Corps looks to its civil brethren for aid in the future and it is clearly the duty of the profession to qualify itself to give that aid in the best and most efficient manner.

The Diseases of Children. By HENRY ASHBY, M.D. Lond., and G. A. WRIGHT, F.R.C.S. Eng. Fifth edition. London: Longmans, Green, and Co. 1905. Pp. 920. Price 21*s.*

THIS book, which by reason of its former editions is well known to medical readers as a thoroughly practical work on the diseases of children, has been submitted to a very complete revision; several of its chapters have been rewritten and a considerable quantity of new matter has been added. There is abundant evidence to show that a most successful

attempt has been made to incorporate in the original text such recent information as is contained in works which deal with the subject of the diseases of children but which are not generally accessible to the class of readers to whom the work under review is dedicated. For instance, the authors acknowledge in their joint preface their indebtedness to the second edition of the "Traité des Maladies de l'Enfance," edited by Grancher and Comby, and to the reports of the Society for the Study of Disease in Children for much valuable assistance. Both of these sources of information are perfect treasure-houses of originality in the domain of pediatrics and the manner in which their best portions have been utilised by the authors of "The Diseases of Children" will be fully appreciated by those to whom the works referred to are more or less inaccessible. True to its established reputation as a practical work intended for students and practitioners, considerations of pathology and morbid anatomy are relegated to the background, while symptomatology and treatment occupy the foremost positions.

In a work which, as we have said, is as a whole brought so thoroughly up to date there might, we think, have been some reference to Mr. J. H. Evans's ingenious explanation of the causation of intra- and extra-cranial hæmorrhages in the newly born, more especially as this important subject is very fully discussed under several headings and as heretofore no reasonable explanation has been forthcoming. We would suggest also that the interesting condition of infantilism, or ateleiosis as it is sometimes called, might have found a place in a work which is in most respects so well up to date. Dr. Byrom Bramwell has recently called attention to the remarkable association of infantilism and pancreatic disease or, at least, to the remarkable improvement in the symptoms which follows treatment with pancreatic extract. Either under the heading of diseases of the pancreas or of developmental abnormalities some reference to this subject might well have been included. When we have added to these somewhat venial faults of omission a trivial sin of commission in the instance of a reference on p. 205 to Sir Thomas Barlow as Dr. T. Barlow, the list of our criticisms is complete. On the whole we regard this new edition as a work which occupies an entirely independent position among text-books on the subject of the diseases of children, many of which bear such a strong family resemblance the one to the other that to have read one is to have read the others. This is not so in the case of the present volume, which is drawn up on original lines and reflects a vast amount of personal clinical experience and practical suggestiveness.

A Contribution to the Pathology of the Endometrium. By JESSIE M. MACGREGOR, M.D. Edin., L.R.C.P. & S. Edin., Lecturer on Gynæcology in the Edinburgh School of Medicine of the Royal Colleges. With 106 microphotographs. London and Edinburgh: William Green and Sons. 1905. Pp. 52.

THIS very interesting book contains the results of a valuable piece of work carried out by the author in the laboratory of the Royal College of Physicians of Edinburgh. Dr. Jessie Macgregor has examined 250 curettings from the uterus and from her study of the sections comes to certain important conclusions concerning the various conditions described under the name endometritis. As she points out, it is rare to find a case which conforms to only one type of so-called endometritis and observers have not uncommonly been misled by an inadequate knowledge of the varying appearances met with in the endometrium at different levels and at different periods of life. The normal structure of the mucous membrane of the body of the uterus is described first of all in detail. The difficulties in determining the normal appearances are considerable owing to the fact that the tissues are so constantly undergoing periodical changes and the boundary between physiological and pathological changes is by no means a certain one. In describing the cells of the stroma the author confesses that she is unable to determine the exact nature of the small cells found scattered within the interstices of the cells of the stroma which resemble leucocytes but which have been described by some German authors as young formative stroma cells or "Ersatz-Zellen." The interesting manner in which leucocytes pass through between the epithelial cells into the lumina of the glands and on to the surface of the uterine cavity is well shown in several of the microphotographs; they appear to make a way for the subsequent passage of the blood corpuscles, a fact which may explain the occurrence of the ante-menstrual and post-menstrual leucorrhœa which is so common. The changes occurring in the mucous membrane during menstruation and the formation of the decidua are described, the account of the former being based on the changes found by Heape in the monkey. In discussing the pathological conditions the various elements which make up the mucous membrane are dealt with separately and the changes in each are considered. The glands may undergo active changes in the form of hyperplasia with or without œdematous enlargement, or passive changes—viz., atrophy and destruction by hæmorrhage, serous exudation, or new growths. The two main changes met with in the epithelium of the glands consist in œdematous or mucoid changes or such as are associated with a relative diminution in the size of the glands; in the latter case the cells are well defined and the nuclei are large, stain darkly, and are compactly arranged. There are, however, many transition forms between these two main types.

The density or rarity of the stroma is shown to bear no relation to the size or number of the glands. In describing the changes in the stroma Dr. Macgregor says that she has seen specimens in which there was distinct evidence of the small fusiform stroma cells, which are usually present round the glands and form a species of basement membrane, passing through between the epithelial cells in a manner similar to that which is seen in the case of leucocytes. Their very close resemblance to the nuclei of the glandular epithelium is pointed out and after an examination of a number of sections we have not been able to convince ourselves that they are not in reality these nuclei and not the fusiform cells. It seems very improbable that any such invasion of the glands on the part of these stroma cells should take place, but the matter is one very difficult of proof and Dr. Macgregor's experience renders her opinion one of great value.

The existence of two distinct types of vessels in the endometrium is called attention to—the thin-walled veins and capillaries and the so-called arterioles. The latter should hardly be called arterioles since they seem to have no definite connective tissue wall, it being composed only of the adjoining cells of the stroma. Not only do these vessels seem to be limited by the cells of the stroma but the author is of the opinion that they may even give rise to stroma cells. This view is most interesting in relation to the hypothesis of the origin of fibroid tumours from such cells. Another interesting fact in connexion with these "arterioles" is that they never become dilated, however congested the endometrium may be.

In an attempt to classify the pathological changes occurring in the endometrium a division into the three following types is adopted—namely, malignant disease, non-malignant disease, and transition forms. Since so many scrapings from the uterus show no signs of any real inflammatory reaction, Dr. Macgregor considers that the term endometritis should be abandoned for most of these

conditions and a return made to the old name of uterine catarrh. In view of our want of exact knowledge of the changes in the endometrium which are purely physiological, the author suggests the following classification of the pathological conditions: congestive œdema, adenoma, interstitial hyperplasia, angio-sclerosis, and the changes due to decidual and fœtal retention. The transition types are more difficult to classify and to recognise with certainty. The exact relation of many of these changes to the development of malignant disease is but imperfectly known, but fortunately in the case of the mucous membrane of the body of the uterus there is usually time for further observation and not the immediate urgency for operative interference which is present in cases of suspected carcinoma of the cervix. A very interesting conclusion which is brought out by these specimens is that there are few or no characteristics which serve to give a trustworthy guide as to the parity or age of the patient or to the condition of the walls of the uterus or the adnexa.

For further information as to the relation of endometrial changes to clinical symptoms and the causes and effects of the various changes in the endometrium we must refer our readers to the book itself. It is well worth reading and will prove of great interest to all those concerned in gynæcological teaching and practice. It is illustrated by a series of 106 microphotographs which are well reproduced and many of them are of great interest. We must congratulate Dr. Macgregor on the good use that she has made of her opportunities and on the light which this work tends to throw on many of the interesting problems connected with the subject of endometritis.

LIBRARY TABLE.

The Chemists' Annual, 1906. London: *The Pharmaceutical Journal* Office. 1905. Pp. 372. Price 10*s.* 6*d.*—The publication of this "Annual" for the use of pharmacists marks a new departure of the Pharmaceutical Society which, we should think, will be very widely appreciated by its members. The "Annual" contains information of special concern to the pharmacist and will oftentimes save him trouble in referring to a number of subjects which otherwise are scattered throughout literature. A glance down the literary contents shows that considerable pains have been taken not only to include all the subjects that are related to modern practical pharmacy but to bring also the information into line with recent advances and requirements. The sections on "New and Old Remedies" and "The Pharmaceutical Journal Formulary" with the additions of 1905 should prove a constant and convenient source of reference.

Select Methods in Food Analysis. By HENRY LEFFMANN, A.M., M.D., Ph.D., and WILLIAM BEAM, A.M., M.D., F.I.C. Second edition, revised and enlarged. London: Rebman, Limited. 1905. Pp. 396. Price 11*s.* net.—This work is deservedly well known amongst analysts in this country for though not pretending to be an exhaustive guide on the subject of the detection of adulteration of foods, care is taken to include only those methods which, when intelligently pursued, give satisfactory results. American work, we are told in the preface, "is rapidly becoming the leader in food analysis." We are prepared to accept this statement only so far as it refers to the admirable way in which the Government in America is recognising the value of the application of analysis to problems of public health and we could wish that our own Government would show a greater zeal in this matter. But the English analyst, we think, may fairly claim to be a leading contributor to the scientific methods of analysis on which the detection of modern adulteration is based. We have distinct evidence of this in the book before us in which the methods of analysis founded by English chemists are again and again recommended, or their work on given processes is quoted. Of the chapters calling for special remark those on the fats and oils and milk and milk products are, we think, the most valuable and the most thoroughly treated. The methods outlined are, to use a trade expression, the best procurable. A word of praise is also due for the excellent schemes given for the detection of colouring matters and of preservatives. Altogether the book is a trustworthy guide to the analysis of the commonly occurring articles of food applied with a view to the detection of adulteration.

Maladies communes à l'Homme et aux Animaux. Par MM. MOSNY, L. BERNARD, GALLOIS, MENETRIER, GILBERT et FOURNIER, VAILLARD, DESCHAMPS, P. BROUARDEL et GUIART. Paris: Baillière et Fils. 1906. Pp. 428. Price 8 francs.—This volume, which is one of a series published under the editorship of Professor P. Brouardel and Professor Gilbert, is written in collaboration with a number of specialists. It is a very useful summary of facts connected with certain diseases communicable to men from animals. The principal ones treated are tuberculosis, scrofula, glanders, actinomycosis, anthrax, psittacosis, rabies, tetanus, trichinosis, and ankylostoma. Those of parasitic origin are fully illustrated, whilst the microbic sources of the others, together with the up-to-date methods of demonstrating the same, are clearly described. The methods of diagnosis, both clinical and experimental, are given in detail, as are also the modern methods of prophylactic and curative treatment. The whole work is clearly and graphically carried out and the names of the different writers, who are specialists in their respective branches, are a sufficient guarantee that the work is one of standard value.

Lectures on Auto-Intoxication in Disease or Self-poisoning of the Individual. By CH. BOUCHARD, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a Preface, and new chapters added by THOMAS OLIVER, M.A. Durh., M.D. Glasg., F.R.C.P. Lond., Professor of Physiology, University of Durham. Second revised edition. Philadelphia: F. A. Davis Company. 1906. Pp. 342. Price $2 net.—In placing this revised translation before his medical brethren the translator says that he feels that he is performing a useful service to the profession. He has been hoping for many months that Professor Bouchard would publish a new edition of his book, but for want of time the distinguished French *savant* has not been able to revise his original lectures up to the present. In giving to the profession a new edition of this work the translator has therefore himself endeavoured to bring the subject of auto-toxis up to date. In these lectures Professor Bouchard's main contention is that the human body forms poisons which but for the watchful activity of the eliminating organs, especially the kidneys, would injuriously react upon the body and endanger life. He discusses the subject of the entrance of poisons *ab extra* but does not deal with the question of how the body protects itself against the invasion of microbes. Since Professor Bouchard's book was published a new school of pathologists has not only indicated how auto-intoxication may be prevented by the activity of the healthy emunctories but has also shown how the body itself may be protected against disease by the operation of certain chemical and bio-chemical processes. In an appendix to this revised edition Dr. Oliver writes of the natural defences of the organism against disease and on auto-intoxication of intestinal origin. Among the natural defences he lays stress on those chemical defences of the organism which are associated with the structure and activities of the cells that compose the tissues. Dr. Oliver considers that the treatment of auto-intoxication by means of intestinal antiseptics is of little use without due attention being also paid to such

prophylactic measures as careful dieting and the administration of suitable aperients. The book treats of questions which are of great interest and importance to the whole medical brotherhood.

JOURNALS AND MAGAZINES.

The Edinburgh Medical Journal.—The February number opens with a paper by Dr. A. Freeland Fergus on the Clinical Value of Bacteriology in Ophthalmic Practice, which points out the varieties of bacteria which may cause conjunctivitis and incidentally contains some comment upon recently introduced preparations of silver vaunted as superior to the nitrate. Major D. G. Marshall, I.M.S., writes an account of an outbreak of beri-beri on a ship arriving at Leith and discusses the theories set forth in explanation of this disease; in this instance infection derived from a cargo of rice husks was possible and conveyance by insects was suggested by the enormous numbers of these creatures which swarmed over the ship. Dr. R. Dods Brown writes on Typhoid Bacilluria and Mr. W. G. Porter on a case of Congenital Atresia of the Choana. Mr. R. Llewellyn Jones contributes a careful account of Spondylitis or the vertebral type of rheumatoid arthritis and appeals for the omission of the former term from our nomenclature as tending to obscure the real nature of the malady.

The Scottish Medical and Surgical Journal.—The February number contains an article by Mr. J. Hogarth Pringle on Hæmorrhage from the Middle Meningeal Artery which is of considerable interest. Notes of 15 cases are given, of which ten were operated on, with four recoveries. The outlook in this condition is recognised as very grave. Dr. Francis D. Boyd writes on the Dechlorination Treatment of Dropsy and Dr. J. Mackie Whyte records a case of suppurative hepatitis following inflammation in an acquired diverticulum of the sigmoid flexure.

The Medical Chronicle.—In the January number Dr. Julius Dreschfeld adds one more to the contributions recently made to the study of Graves's disease and quotes the results of treatment with antithyroid serum in 21 cases. Of seven hospital cases three were cured and two were much improved, while of 14 private cases seven were cured and four improved. These figures are certainly encouraging. A paper by Dr. J. Lorrain Smith deals with the origin of disease in bacterial growth in the intestine and suggests that there is normally an inhibitory influence exerted by the healthy intestinal mucosa which is liable to be diminished by conditions of disease. Dr. Andrew C Clarke, as the result of some experiments on the lesions produced in lymphatic glands by different races of tubercle bacilli, concludes that avian and other varieties are not distinct species of organisms.

The Birmingham Medical Review.—In the December number of this review is contained an interesting account of the recently recognised condition, polycythæmia vera, called also Vaquez's or Osler's disease, in which there appears to be an increase not only in the concentration of the blood but also in its total volume—a true plethora. The causation of the disease is at present unknown, theory attributing it either to an unknown toxin or to a process analogous to tumour formation (erythroblastoma). Dr. J. W. Russell writes on Abdominal Pain associated with Symptoms of Epilepsy and Dr. W. H. Wynn contributes a summary of our knowledge of Gonorrhœa as a General Infection or Septicæmia. In the January number is contained the Middlemore Lecture for 1905, delivered by Mr. Henry Eales, and dealing with Nasal Causes of Ophthalmic Diseases, and also the first part of a paper by Mr. Jordan Lloyd on the Treatment of Facial Neuralgia by Excision of the Gasserian Ganglion. Professor R. Saundby records a case of Dysphagia due to Pericarditis and points out that pain in swallowing, though mentioned in the text-books, is not commonly present in this disease.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

EUCAINE LACTATE.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, LONDON, E.C.)

EUCAINE lactate while possessing the anæsthetic power of the cocaine salts has the advantage of being non-toxic and non-irritating, while it is stated also that it does not constrict the blood-vessels or dilate the pupil. The solution in water is stable and may be sterilised by boiling without any effect upon the salt. 2 per cent. solutions are used in dental work and in general surgery 4 per cent. solutions are used for producing local anæsthesia by hypodermic injections. Eucaine lactate is employed for ophthalmic purposes and for laryngoscopy and rhinoscopy. It is convenient also for use previously to the application of the galvano-cautery. The hypodermic tabloid contains either one-third grain or one grain of the salt, according to requirements, while soloids of eucaine lactate are prepared containing one grain and five grains of the salt respectively.

PRESERVED FRUITS IN LACQUERED TINS.

(CHIVERS AND SONS, LIMITED, HISTON, CAMBRIDGE.)

There can be little doubt that fruit juices act upon tin, although the amount of tin dissolved is usually quite small. Still it is not desirable that preserves should be contaminated with metallic salts even although those salts do not appear to be injurious. There is no distinct evidence that small quantities of tin salts are prejudicial to health but it is possible, and the only way of eliminating any doubt in the matter is either to give up the use of tin for the purpose or else to adopt a means by which any action upon the tin is made impossible. Glass, of course, from a hygienic point of view is the most satisfactory material that can be employed but its use entails obvious disadvantages. In transit, for example, glass vessels are liable to break, they cost more to pack, and they cannot be handled with the same impunity as can a metal container. It is satisfactory to learn that the old objection to the use of the tin container for the purpose of preserving fruits has been completely overcome by a method recently adopted by Messrs. Chivers and Sons, the well-known fruit growers and manufacturers of jams, of Histon in Cambridgeshire. The process is extremely simple and consists in uniformly covering the tin with a thin veneer of lacquer which is absolutely proof against the action of fruit acids and in fact, as we have found, against even the action of mineral acids. We have examined several tins in which various jams have been kept and in no instance were we able to find any evidence of the tin being acted upon, the lacquer being just as sound as when it had first been put on. In particular we examined a tin of greengages which had been packed in 1900. The fruit was in excellent condition and there was not the faintest indication of metallic contamination or of any corrosion of the tin. The tins are hermetically sealed, the lid pressing tightly on a thin rubber film. In view of these results there is no reason whatever why prejudice should any longer exist against the use of tin for packing preserves so long as this veneering process is carried out in the satisfactory way just indicated. This departure not only satisfies hygienic requirements but also is calculated to reduce the cost to the consumer of a popular, palatable article of food. The method, it seems to us, should give a stimulus to home fruit growing as it provides a satisfactory means of preserving fruit which is hygienically sound and

economical. We carried out a number of careful experiments with the following fruits preserved and packed in this way: raspberries, strawberries, gooseberries, plums, blackberries, greengages, and damsons. In no instance was there the least indication of any action on the tin and not a trace of tin could be found in the syrup, while the colour of the fruit was satisfactorily preserved.

GLYCERINE SUPPOSITORIES.

(S. MAW, SON, AND SONS, 7 TO 12, ALDERSGATE-STREET, LONDON, E.C.)

The feature of these suppositories is their shape which may be best described as being like that of a torpedo. They are about one and a half inches long and their girth at the centre is about three-eighths of an inch. From the centre the suppository tapers to a point in opposite directions.

ARSENFERRATOSE (BORHRINGER).

(DOMEIER AND CO., LIMITED, 20 AND 21, HARP-LANE, LONDON, E.C.)

Arsenferratose contains arsenic and iron in what may be regarded as organic combination. We found also that albumose or an allied product was an important constituent. This combination is calculated to exhibit both the iron and the arsenic in a readily absorbed form and we have read some interesting clinical evidence in favour of its value in anæmia and in conditions generally in which the tonic qualities of iron and arsenic are indicated.

GENUINE CLARETS AT MODERATE PRICES.

(W. AND A. GILBEY, PANTHEON, OXFORD-STREET, LONDON, W.)

That good and wholesome claret may be procured at moderate prices is very well illustrated in these samples. The prices range from 1*s.* to 2*s.* a bottle and we have not the slightest doubt that they are genuine Médoc wines which, moreover, possess pleasing, palatable qualities. The analyses of the samples which we have examined gave results which are perfectly consistent in every detail with the description of a genuine Médoc wine. For example, the wine labelled Bordeaux and marked 12*s.* per dozen gave the following results: alcohol, by weight 9·36 per cent., by volume 11·61 per cent., equal to proof spirit 20·35 per cent.; extractives, 2·78 per cent.; sugar, 0·083 per cent.; mineral matter, 0·28 per cent.; volatile acidity reckoned as acetic acid, 0·123 per cent.; fixed acidity reckoned as tartaric acid, 0·450 per cent.; nitrogenous matters, 0·213 per cent.; glycerine, 0·780 per cent.; and tannin, 0·236 per cent. This is a perfectly sound genuine claret of the *vin ordinaire* type. The wine is practically free from sugar and from acidity. The sample Bás Médoc at 15*s.* a dozen gave the following results: alcohol by weight, 9·36 per cent.; extractives, 2·54 per cent.; sugar, 0·065 per cent.; mineral matter, 0·24 per cent.; volatile acidity reckoned as acetic acid, 0·108 per cent.; fixed acidity reckoned as tartaric acid, 0·453 per cent.; nitrogenous substances, 0·197 per cent.; glycerine, 0·698 per cent.; and tannin, 0·236 per cent. This is also a good sound light wine, showing rather more quality than the previous sample. The sample marked Médoc at 18*s.* per dozen gave the following results: alcohol by weight, 9·36 per cent.; extractives, 2·38 per cent.; sugar, 0·063 per cent.; mineral matter, 0·24 per cent.; volatile acidity reckoned as acetic acid, 0·074 per cent.; fixed acidity reckoned as tartaric acid, 0·457 per cent.; nitrogenous matter, 0·229 per cent.; glycerine, 0·68 per cent.; and tannin, 0·295 per cent. This wine showed a good development of colour, which is invariably the case when the amount of the nitrogenous constituents is higher than usual. The wine showed particularly good æsthetic qualities and was soft and non-acid to the palate. The sample marked Château Loudenne at 24*s.* a dozen comes very closely in character to the wines of "a classed growth." It is a delicate sound wine and well matured. On analysis the following results were obtained: alcohol by weight, 10·08 per cent.; extractives, 2·50 per cent.; sugar, 0·11 per cent.; mineral matter, 0·27 per cent.; volatile acidity reckoned as acetic acid, 0·102 per cent.; fixed acidity reckoned as tartaric acid, 0·446 per cent.; nitrogenous matter, 0·179 per cent.; tannin, 0·224 per cent.; and glycerine, 0·561 per cent. All four specimens show a remarkable similarity of composition which is further evidence of their genuine character. These wines serve to support our contention that really good genuine Médoc wine of pleasing qualities may be procured at quite reasonable prices.

New Inventions.

A MODIFIED OPHTHALMOSCOPE.

THE accompanying illustration represents an idea in the shape of an improvement that occurred to my mind while engaged in testing for ocular refractions with Gowers's ophthalmoscope. It consists of an addition to the instrument of a simple device by which its range and efficiency are increased about fivefold and yet it is neat in appearance and not clumsy to handle. There is nothing new in the principle by which these objects are attained, the difference lies in the method of applying that principle so as to get the best possible result in limited circumstances. As seen in the illustration the contrivance I introduce is a small jointed

Ophthalmoscope showing arrangement of lenses. Number possible, 72.

crosspiece fixed at the back of the mirror above the original revolving circle and carrying two lenses at each end numbered as indicated − 16, − 8·5 towards the right, + 16, + 0·5 towards the left. By moving these over the sight-hole and combining with those in the disc below as required a succession of whole and half dioptre lenses is obtained extending upwards and downwards beyond what is generally sufficient for all optical purposes. Having tried this arrangement for myself and finding that it gives satisfaction I can commend the instrument as now completed without hesitation to any in need of a sound and serviceable article. I have ordered mine from Mr. Ash, 115, Edmund-street, Birmingham.

Sparkbrook, Birmingham. M. MACKAY, M.A., M.B.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 24, 1906.

The Distribution of Cancer in our Dependencies.

THE Colonial Office has performed a service of importance not only to the interests of Great Britain and her colonies but to the whole world, by actively promoting investigations into the occurrence of cancer among the native races in the dependencies of the British Empire. Owing to the range of British possessions sources of information can be employed by our Colonial Office which are unrivalled in number and diversity by any at the disposal of other nations. To Mr. CHAMBERLAIN belongs the credit of having perceived how valuable the organisation of the Colonial Office might be made to the cause of preventive medicine. At the foundation of the Imperial Cancer Research Fund he nominated Mr. HERBERT J. READ to represent the Colonial Office on the Fund, and in 1903 he drew the attention of colonial civil and medical officials to the nature and value of the information which it was in their power to supply to the Fund, provided pains were taken to search for data in respect of the occurrence of cancer and to secure their accuracy. As a consequence the Imperial Cancer Research Fund has been placed in direct communication with all the officers of the Colonial Medical Service. Similar official recognition has been conferred on inquiries in the dependencies within the jurisdiction of the Foreign and India Offices, in the self-governing colonies, in South Africa, Egypt, and elsewhere. The good work of the Colonial Office under Mr. CHAMBERLAIN was continued under Mr. LYTTELTON. A small Blue-book has now been issued containing further correspondence arising out of the action of the Colonial Office, and in it we are glad to note a despatch from Lord ELGIN as evidence that the beneficent work will be continued under the present Government.

The correspondence in this Blue-book consists of the more recent replies to a despatch in which Mr. LYTTELTON emphasised the need for investigating and recording cases of cancer in a uniform manner, and the desirability of forwarding specimens to London for microscopical examination when such detailed investigation was impracticable on the spot. The publication consists mainly of reports on the occurrence of cancer among certain African races, in Ceylon, Hong-Kong, Jamaica, New Guinea, and the Straits Settlements, and the investigations show the value of the persistence of the Colonial Office in encouraging the search for information of this kind. For example, the reports tend definitely to establish the rarity of carcinoma and sarcoma among the indigenous inhabitants of British New Guinea and West and Central Africa. The reasons for this rarity are probably several but we cannot speculate upon them here, for in the present imperfect state of our knowledge concerning the origin and spread of cancer such conjecture has no bounds. But quite apart from the difficulties surrounding all research into a disease where the etiology is a matter of debate, the conditions for observing malignant disease in native races necessitate the prolongation of the investigations. Up to the present time few cases of internal cancer have been observed in aboriginals and the reason for this is not difficult to see. External cancers are the only ones that can be readily detected by medical officers who have to rely almost entirely on their own observations for obtaining information. Aboriginals are for the most part as ignorant of their own internal anatomy, structure, and natural functions as any one of the lower animals and are little likely to vouchsafe trustworthy information concerning the site and nature of abdominal discomfort. In circumstances where ill-health possesses no advantages, even for the malingerer, the difficulties of discovering a large number of cases of internal cancer are not to be under-estimated, and too much stress must not be laid upon the apparent rarity of such conditions.

For every reason we welcome the continuous stimulus to these laborious investigations emanating from the Colonial Office. This is, however, no mere isolated instance of the promptness of the Colonial Office in recognising the importance of questions of preventive medicine and of the value of combining the isolated officials of the Colonial Medical Service into an organisation of trained observers, each able to contribute his quota of experience for the benefit of humanity. The recent advances in the knowledge and study of tropical diseases in Europe and America have been made possible chiefly through the enlightened initiative of our own Colonial Office. What the London and Liverpool Schools of Tropical Medicine owe to this initiative is a matter of common knowledge. The part that the Colonial Office has played in securing provision for a chair of Protozoology in the University of London and diplomas in tropical medicine in other Universities is not so well known, nor have the unostentatious services which it has rendered in encouraging other Government offices to follow in its wake been sufficiently recognised. But we still have Government offices which hesitate to untie their old red bands in favour of science. The Post Office, without additional expense, or even with profit, could contribute to the development of imperial preventive medicine by facilitating communication where questions of the diagnosis of disease require immediate settlement in the public interest. But the Post Office places every obstacle in the way of the public health officer at home and the isolated worker abroad. The report of the Imperial Cancer Research Fund for last year stated that the organisation developed with the support of the Colonial and other Government offices had been seriously handicapped by a regrettable example of red tape on the part of the Post Office. Small pieces of dead tissue, preserved in formalin and consequently as harmless as pieces of wood, were declared to be forbidden by the Convention of Washington as "articles which from their nature expose officials to danger, or soil or damage the correspondence." This attitude on the part of the Post Office shows that here the Government officials have failed to profit by the

enlightened initiative of the Colonial Office in medical matters. It has, we think, become a matter of urgent public necessity that the chiefs of Government departments should be willing to modify their attitude towards the incontrovertible facts of scientific medicine.

Hospital Subscribers' Letters of Recommendation.

IN affording opportunity for a discussion upon hospital subscribers' letters of recommendation the Charity Organisation Society has wisely demonstrated a desire to keep abreast of the times in a matter which closely concerns the well-being of the poor and the avoidance of the abuse of medical service. There is a widespread feeling amongst members of the medical profession that hospitals, especially the great general hospitals, are largely detrimental to practitioners whose avocation lies in the immediate vicinity. It has often been asserted that in the desire to obtain and to retain interesting material for teaching purposes sufficient care is not taken to exclude from the benefits of hospital treatment those who are not to be regarded as having legitimate claims for gratuitous treatment. Numerous suggestions have been made to safeguard the hospitals from this charge, the most important deterrent being the appointment of almoners whose duty it is to make inquiries as to the means of those who present themselves as out-patients. Too much must not, however, be expected from the researches of almoners, for a man's circumstances may be as difficult to detect as his disease, and the machinery of investigation into the means of hospital patients is necessarily rough. Moreover, members of the staff of the hospitals cannot be expected to divert their attention from questions of disease to those of finance; glaring examples of abuse may force themselves on their notice occasionally and may necessitate comment; but the purely professional aspect and the need of maintaining a running course of instruction to the pupils of the school leave little room for other duties. At the end of the day uneasy suspicions may remain that certain patients might have been expected to be able to afford the moderate fees of an outside practitioner, but at the moment the mere fact of illness was probably sufficiently engrossing to prevent remark.

Theoretically, the employment of subscribers' letters should be one of the checks against the abuse of the charity afforded by hospitals. They are intended to be granted only to those whose necessitous condition is known to the subscriber or his agent, and it should be inconceivable that a subscriber to a charity should desire or should countenance abuse of that charity. This is, however, taking too sanguine a view of human nature, since there appears to be abundant evidence that subscribers' letters do occasionally get into the hands of those for whom hospital relief is not intended and they thus may become a source of the greatest abuse. The difficulty with subscribers' letters is the greater since there is no uniformity of practice with regard to them observed by the different institutions. This point was insisted upon by Mr. H. NELSON HARDY in a short paper read at the commencement of the recent proceedings at the meeting of the Charity Organisation Society. Quoting from the report of a Select Committee of the House of Lords he stated that subscriptions are made to hospitals by friendly societies, provident institutions, and business establishments, and notably by the Hospital Saturday Fund, with an express view of obtaining in return and making full use of letters of admission, and as a matter of fact it is well known that many workmen regard the subscriptions of their unions to hospital funds simply as payments for services rendered, regardless of the disproportion between the sums paid and the benefits received. It is well recognised that trouble has arisen with some of these bodies in regard to the reception of those provided with subscribers' letters, trouble which appears to be due to a misunderstanding, as was indicated by Dr. N. TIRARD in a speech at the same meeting. In most hospitals the letters are merely recommendations for appropriate treatment; they are not orders for admission. So long as subscribers' letters are retained it is difficult to conceive how they can be converted into orders for admission; apart from considerations of space in the wards there must be discretionary powers of refusing unsuitable cases, if only because it is within the range of possibility that infectious cases might inadvertently be sent up in the prodromal stage. Again, cases that can be treated outside must be so treated in order that beds may be available for more urgent cases. That a claim for admission cannot be supported on any grounds of fairness or economy is well shown by comparing the average cost to the charity of each in-patient for one-week (and many stay much longer) with the average amount contributed by the subscriber to entitle him to a letter of recommendation. If in-patient letters are to be regarded as a form of payment the tariff wants drastic readjustment.

The enormous and disproportionate increase in the number of out-patients receiving hospital treatment during recent years calls for some measure of reform. Year after year—on occasions week after week—we have pointed out that the existing system not only leads to overcrowding of the out-patient rooms whereby the sick suffer but inflicts much hardship upon many members of the medical profession and so fosters an unfortunate spirit of antagonism between general practitioners and consultants. At the special meeting of the Charity Organisation Society it is not surprising to find that this side of the question was not presented by any of the speakers. Where all were concerned with the desire to check abuse the relation of hospitals to medical men needed only to be indirectly touched upon. Dr. TIRARD, who opened the discussion, urged that if it was necessary to retain subscribers' letters as a method of hospital management they should be distributed amongst medical men in poor districts who were better judges of the medical suitability of the cases than any layman could be, but he added that medical men knew from experience that patients presenting the card of a medical man could have no better passport in any hospital in London. It has been frequently urged that to abolish subscribers' letters would reduce subscriptions to hospitals but Dr. TIRARD was of opinion that the letters might, on the contrary, constitute a source of danger, since valuable sympathy might be alienated when letters were returned marked "unsuitable." It is undoubted that a certain

rather grasping kind of hospital supporter resents deeply the non-admission of any patient bearing one of his letters. Sir EDMUND HAY CURRIE, the Secretary of the Metropolitan Hospital Sunday Fund, gave his personal support to the proposed abolition of subscribers' letters but in view of the number of applicants for hospital relief he hesitated to pronounce any official statement. That the subject is one of pressing importance was evident from the size of the gathering at which it was discussed as well as from the standing of those who expressed their views. Whilst most of the speakers agreed in the main that the abuses engendered by subscribers' "letters" more than counterbalanced their benefits, a protest was raised on behalf of the Brompton Hospital for Consumption and Diseases of the Chest. Here the opposite view was taken, but hospitals like those for the treatment of pulmonary tuberculosis may well differ in the details of their management from general hospitals. Although no formal motion was proposed the course of the discussion evinced a strong feeling in favour of the abolition of subscribers' letters, and there can be little doubt that, now that attention has been drawn to the subject, the much-needed change is likely to be considered seriously by all interested in hospital administration. That the reform can be made upon their own initiative by the different hospital committees appears to be extremely unlikely, although this was suggested by Sir EDMUND CURRIE. There is not sufficient agreement amongst the various committees which would be variously influenced by the fear of losing subscribers. The reform can only, we believe, be effected through a definite expression of opinion from King Edward's Hospital Fund, supported by the action of the Metropolitan Hospital Sunday Fund. The coöperation of the Hospital Saturday Fund, branches of which are stated at present to be the chief distributors of subscribers' letters of recommendation, would also be required.

Infant Feeding and Epidemic Diarrhœa.

IN the January number of the *Journal of Hygiene* Dr. J. E. SANDILANDS refers to the result of inquiries made in Finsbury regarding the food taken by a series of 554 healthy infants during their first nine months of life. These inquiries showed that the infants fed respectively on human milk alone, on condensed milk, on cow's milk, and on "artificial foods" formed respectively 69, 10, 19, and 2 per cent. of the total. With these figures for "healthy infants" Dr. SANDILANDS contrasts those obtained by the Finsbury public health department regarding the food taken by the 139 infants under nine months of age, who died from diarrhœa in Finsbury during the years 1903 and 1904. Following usual experience, the proportion of infants dying from diarrhœa who were ascertained to have been breast-fed proved to be small. The total of such cases was 22, or 16 per cent. of the 139 deaths. Of the remaining 117 cases of fatal diarrhœa, 44, 63, and 10 (32, 45, and 7 per cent.) respectively were reported to have been fed on condensed milk, on cow's milk, or on "artificial foods." The figures are small and many points would need elaboration before these data could properly be used as a numerical indication of the relationship between one or another class of food and the occurrence of diarrhœa. To give but one instance, it must often have been difficult to determine the proper classification. Condensed milk is frequently substituted for cow's milk, or *vice versâ*, after the infant has already begun to suffer from digestive disturbance. So far as they go, however, the figures accord with the view generally held that in the case of hand-fed infants condensed milk, as ordinarily administered, does not present any advantage over cow's milk in respect of liability to be associated with infantile diarrhœa. Dr. SANDILANDS made a series of experiments with tins of condensed milk, the tops of which had been removed. After these tins had been exposed to the air of the laboratory for 24 hours he determined the total number of bacteria in their contents. The condensed milk was then incubated either at 22° C. or at 37° C. and further estimations of the total number of bacteria were made day by day for eight days. Parallel estimations were made in the case of condensed milk which, after remaining exposed to the air for 24 hours, was diluted with nine times its volume of water before incubation. The latter, as might have been expected, showed a very rapid increase in total micro-organisms on incubation. The undiluted condensed milk, however, in most cases altered comparatively little. One specimen which after 24 hours' exposure to the air contained 80 bacteria per cubic centimetre showed no more than 200 per cubic centimetre after eight days' incubation at 37° C. It is clear that the total number of bacteria received by an infant from, say, half a pint of "milk" freshly made by diluting the contents of a tin of condensed milk (even if the tin has been standing open for some time) is usually far less than the number which it would receive from half a pint of ordinary cow's milk as purchased in towns. Another noteworthy difference is that many of the opportunities of contamination by dirt and fæcal matter to which ordinary cow's milk is exposed and which are frequently regarded as playing an important part in the production of autumnal diarrhœa of infants are absent in the case of condensed milk. If it be a fact that infants fed on condensed milk are at least as liable to autumnal diarrhœa as infants fed on cow's milk and much more liable than breast-fed infants these points must be taken into account. Dr. SANDILANDS favours the view that in the case of either food the milk acts rather as a mechanical carrier of adventitious infective material than as a substance in which the specific bacteria have first to multiply or to produce toxic substances. He points to the conveyance of fæcal infection to food by means of house flies and suggests that by the assumption of sufficient activity on the part of flies during an epidemic of autumnal infantile diarrhœa, it is possible to regard each infant as having received his infection as a result of recent ingestion of excremental matter from an antecedent case of diarrhœa. He also points out that many of the conditions which BALLARD showed to influence epidemic diarrhœa of infants (including the correspondence between prevalence of the disease and deep earth temperature) are probably conditions which are closely related to the multiplication of house flies. We hope that Dr. SANDILANDS will be able to make further investigations into some of the many intricate problems to which he has drawn attention.

The Metropolitan Asylums Board and the Organised Treatment of Pulmonary Tuberculosis.

THE appearance in the *Times* of Feb. 2nd of a memorial addressed by Sir WILLIAM H. BROADBENT to the Metropolitan Asylums Board had somewhat the appearance of a design to influence the members by the pressure of what might be described as "public opinion." Sir WILLIAM BROADBENT strongly urged the Board to "constitute itself" the tuberculosis authority for the metropolis and thus to show its power to make a sensible impression upon a disease which he rightly described as costing the country tens of thousands of lives and millions of money every year. He stated that "consumption, an infective disease, carries off more victims than all the other infective diseases put together," an assertion which if applied to pulmonary tuberculosis only to the exclusion of other forms of the malady is not quite correct. In the report of the medical officer of the County of London for the year 1904, just issued by the County Council, the metropolitan mortality from pulmonary tuberculosis during the year amounted to 7554, and the mortality for the same period from the principal epidemic diseases—namely, small-pox, measles, scarlet fever, diphtheria, whooping cough, fever, and diarrhœa—amounted to 9906. We have, however, no desire to minimise the evils of consumption which are appalling, and the means which Sir WILLIAM BROADBENT desires the Metropolitan Asylums Board to employ against them must be of interest to all of us. His desire is that the Board, as soon as it has "constituted itself" in the indicated manner, should use its new powers for the ascertainment of the number and distribution of the cases of consumption within the metropolitan area and the stage of the disease, together with the circumstances and the surroundings of the sufferers. This would be done by a system of notification, compulsory with regard to patients under Poor-law officials or in public institutions, but in the first place only voluntary for other persons. The notification is to be followed by visits from philanthropic ladies or from sanitary inspectors, by instruction in the methods of guarding against infection, and by gifts of nourishing food. In advanced cases the sufferers should be transferred to one of the hospitals of the Board, and the inevitable close of their lives rendered as tolerable to themselves and as little dangerous to others as circumstances would permit. Sir WILLIAM BROADBENT affirms that it is not in the power of parishes, or health authorities, or municipalities, or of the London County Council, to cope with tuberculosis, but that London is fortunate in the possession of an organisation in the Metropolitan Asylums Board well qualified by experience of disease and by knowledge of the special needs of the metropolis to render this great service to the community.

The members of the Asylums Board considered Sir WILLIAM BROADBENT'S memorial on Saturday last, Feb 17th, having before them also a similar memorial from the Metropolitan Branch of the Incorporated Society of Medical Officers of Health. Though presumably swayed by a desire to do all that is possible for the general welfare of the community, they perceived that at the present they could do little. They have no power to constitute themselves anything, or to take one single step in the indicated direction without first obtaining the consent of the Local Government Board; and we cannot but think that the experienced administrators of that department will find many things to weigh and to consider before they will be likely to advise the President in favour of the proposed experiment. The experience of other diseases shows that accommodation originally intended for the very poor has soon to be supplied to others who cannot justly be so described; and the mere number of the cases of chronic pulmonary tuberculosis, which before long would find or seek shelter in the hospitals of the Asylums Board, could hardly fail to be a source of great perplexity and difficulty, even without counting the cost. Sir WILLIAM BROADBENT speaks rather lightly, we think, of the facility with which such patients could be displaced if necessary, in order to make room for the sufferers from an epidemic of small-pox or of scarlet fever; such displacement would, as a matter of fact, be a work of enormous difficulty. The proposed visitation of the notified people at their homes would bring the Board into collision with the borough councils, by certain of which something of the same kind is being done already, and all sorts of difficulties and complications would be liable to arise. Another, and perhaps a still more important, objection arises from the fact that the Asylums Board hardly possesses the confidence of the medical profession, by whom Sir WILLIAM BROADBENT'S somewhat optimistic view of its capabilities is not shared. The tendency of the Board has been towards the undue depreciation of its medical officers, and it would only be by the hearty and convinced coöperation of the medical profession that the scheme advocated by Sir WILLIAM BROADBENT, even if it were feasible in other respects, could be carried into general or even extensive operation. In the hands of a body unable to recognise that the chamber of the sick man is the kingdom of the physician it would be foredoomed to utter and hopeless failure.

It will be seen by a brief report of the last meeting of the Metropolitan Asylums Board, which appears in another column of this issue of THE LANCET, that with the object of ascertaining the views of the several metropolitan, city, and borough councils, boards of guardians, and sick asylum districts, and of the administrative bodies of the hospitals for consumption at Brompton and Victoria Park and in the City-road, upon the subject, the general purposes committee of the Metropolitan Asylums Board gave directions that boards of guardians should be asked to express to the managers of the Board their opinions on the question as to whether the managers should undertake the new duties suggested. The replies which were received from the authorities enumerated showed that of the 65 authorities consulted 19 were wholly favourable to the prayer of Sir WILLIAM BROADBENT'S memorial, nine were favourable if the cost were made a national charge, and 14 were unfavourable, whilst the replies of the remaining 23 authorities were more or less indefinite. The Local Government Board in considering the important question in all its bearings with a view to instructing the Metropolitan

Asylums Board as to the course to be taken cannot consequently fall back upon any consensus of practical opinion. In the circumstances the Local Government Board will probably deprecate any impetuosity.

Annotations.

"Ne quid nimis."

THE AFTER-CARE OF THE INSANE.

Sir Richard Douglas Powell gave a short address to the members of the After-Care Association for poor persons discharged recovered from asylums for the insane at the annual meeting on Feb. 15th held at 62, Wimpole-street, London. He made a powerful appeal on the behalf of this unfortunate class. He observed that perhaps no class of cases appealed to them more strongly when fairly brought under their notice than that of the mentally afflicted. The sufferings and sorrows which arose from most illnesses were constantly before them but those which came from mental unsoundness were hidden away; they passed them by, they were a little ashamed of them, and not a little afraid of them. In days not long gone by a lunatic was regarded as something less than human and the victims of insanity were treated as dangerous wild beasts rather than as human beings. All that was changed with the advance of medical science and the awakening of the philanthropic and public conscience to the fact that insanity was but a sickness of the brain, its wildest hallucinations but "sweet bells jangled out of tune and harsh." They had learnt much, and were daily learning more, of the causes and the mechanism of insanity, and all the lessons that they could learn must give them more and more anxiety to make the lives of these patients happier and their lot more tolerable. Humanity compelled them to maintain, to protect, and to treat their mentally afflicted poor in institutions constructed regardless of cost on the soundest sanitary principles and provided with every means that modern science could suggest for their comfort, their welfare, and, if it might be, their cure. He had recently been over one of these institutions with 2000 inmates maintained at a cost of between £70,000 and £80,000 a year. Greater care, skill, and humanity of treatment insured a longer life and a greater percentage of partial and complete recoveries for those patients, but it also entailed a further difficulty—What next to do for them? It was at that stage that the sincerity of the public benevolence was really tested. What could they do for those that got better, prejudiced as they were by the nature of the illness from which they had emerged? Sir R. Douglas Powell then proceeded to show that the society the cause of which they were met to help on that day was the first practical outcome of an awakening philanthropic conscience in that matter. Its objects were, he said, to help in reinstating those who had recovered in social life, to enable them to gather up the threads which they had lost or tangled, and to help them to weave again their own happiness in life and work. In other cases of less complete recovery the society aimed at bringing within the reach of the late patients a measure of freedom and the happiness of occupation. To that end, by grants in aid, by finding out and influencing friends and relatives to lend a helping hand, by seeking out and supervising cottage homes where individuals might be received and cared for, by educating public opinion on matters of which it had as yet taken but little note, and in other ways, the society for the after-care of the insane was perseveringly at work so far as its means would allow. The majority of those who entered asylums would never again be able to return to the general community—their narrow area of life was provided for. For that considerable number of patients, however, who recovered and were fitted to return to social life a period of mental rest out of the asylum was necessary for complete convalescence before they could again face the battle of life and even so, under conditions of lessened stress than those which were too much for them before. A considerable proportion of the cases of imperfect recovery that left asylums were epileptics, and those people appealed perhaps to their strongest sympathies, for whilst they had their nerve storms, their dark hours, and often their eccentricities, they—he meant those of them who could be allowed out of asylums—were harmless, while they had characteristics lacking in many of the insane—viz., sociability and capability of entering into a community of interests and enjoyments. There was no doubt that there were many cases retained in asylums which might be cared for better outside, if the conditions of slight supervision and light work could be secured for them. The occupations open to those who had been insane were somewhat restricted: they were for the most part only fitted to delve and to spin; to be employed in horti- or agricultural pursuits of a simple kind or in simple handicrafts. But there were many hand-made things, many saleable products of the ground which those people, even if partially recovered, might construct and cultivate, and might so contribute towards at least their partial support if suitable country conditions could be found for them. He felt that the subject of village colonies was becoming rather a bore-some one; some cynics might be tempted to remark that all their "crocks" were returning to the land, whilst all their stalwarts were degenerating in the towns. He did not believe that; there were many places within touch of their railway stations where a simple village manufacturing community might be established. It was probable that the asylum system might some day be extended in that direction to meet those many cases which were not quite mad yet needed supervision, as well as cases of partial recovery. But meanwhile, and perhaps always, there would be scope for a benevolent fund well organised to smooth the way of those who had recovered sufficiently to re enter the life of the community. Sir R. Douglas Powell completed his interesting speech by pointing out how difficult the special work of the Society for the After-care of the Insane was, how much tact, discrimination, and delicacy were necessary on the part of the practical helpers, and how much thoughtful organisation on that of the committee. The funds of the society were, he would point out, not too flourishing, although the best use was made of them so far as they would go. A great deal of the work was done gratuitously and with all its officers the labour was one of love. There must always be room for sympathy and work amongst the afflicted poor which no State could provide and which no paid officials could supply. The work of the kind in which that society was engaged had its practical utility enriched and blessed a thousandfold by the sympathy and enthusiasm derived from its voluntary incidence. To Sir R. Douglas Powell's eloquent advocacy of the After-care Association we have not a word to add. The society does admirably useful work on inadequate funds and our readers will be helping a cause that must appeal to all medical men if they insist, whenever opportunities offer, upon the claims of the society to public support.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE forthcoming meeting of the British Association for the Advancement of Science at York in August next recalls the fact that it was in that city that the first meeting of the Association was held in 1831. Since that time two other meetings have been held at York—namely, in 1842 and in 1881, the year of the jubilee of the

Association. This year's visit to York will mark the seventy-sixth year of the Association. Professor Ray Lankester is the President-elect and amongst the sectional Presidents and Vice-Presidents are the following:—Section A (Mathematical and Physical Science): President, Principal E. H. Griffiths; Vice-Presidents, Professor A. R. Forsyth and Professor H. L. Callendar. Section B (Chemistry): President, Professor Wyndham Dunstan; Vice-Presidents, Mr. G. T. Beilby and Professor A. Smithells. Section D (Zoology): President, Mr. J. J. Lister; Vice-Presidents, Mr. G. A. Boulenger and Mr. A. E. Shipley. Section H (Anthropology): President, Mr. E. Sidney Hartland; Vice-Presidents, Mr. A. C. Haddon and Mr. D. G. Hogarth. Section I (Physiology): President, Professor Francis Gotch; Vice-Presidents, Colonel D. Bruce, R.A.M.C., and Mr. W. Bevan Lewis. It may be noted that the balance of the income of the fund which is being raised for the purpose of commemorating the visit of the Association to South Africa last year by means of a medal will be awarded "for achievement and promise in scientific research in South Africa."

THE PHARMACOLOGY OF HORDENINE, AN ALKALOID OBTAINED FROM BARLEY.

THE germinating seeds of barley yield, according to M. Léger, a white crystalline alkaloid, freely soluble in water in the form of sulphate, and named by him hordenine. M. L. Camus[1] has investigated the degree of toxicity and the symptoms of poisoning produced by this alkaloid. He finds that the sulphate is only slightly toxic; the minimum lethal dose for a dog is 0·3 gramme per kilogramme by intravenous injection. A dose of two grammes per kilogramme after ingestion by a dog proved fatal. In large doses it produces symptoms of cortical and bulbar origin (*des manifestations d'origine corticale et bulbaire*). When death ensues it is due to stoppage of the respiration. M. Camus, in a later communication,[2] describes experiments dealing with the action of hordenine sulphate on the circulation. He finds that its action is in accord with the general law that a substance which stimulates in small doses produces paralysis in large doses. In small doses this alkaloid stimulates the pneumogastric system, slows the heart, and increases the amplitude of the pulsations. In large doses these actions are completely reversed. The introduction into the stomach of one gramme of hordenine sulphate per kilogramme of animal (dog or rabbit) produces for some hours a rise in blood pressure and accelerates the action of the heart.

SANITARY CERTIFICATES FOR SCHOOL CHILDREN.

AT the commencement of the present French scholastic year—namely, on Oct. 1st, 1905—a new departure was taken in the municipal schools of Nice on the initiative of Dr. César Roux. Every child entering the school was given a "health record" (*livret sanitaire*) in which were entered particulars as to his or her name, age, domicile, birthplace, the success or the reverse of vaccination, weight, height, chest measurement, and notes about the capacity for playing games. The record also contained short instructions upon sanitary matters for the use of the parents. Corresponding with this record was another document (*fiche sanitaire*) which is to be kept by the medical inspector of schools and in which are entered more purely medical particulars as to the child's past and present state of health, together with notes upon the vision, hearing, teeth, and mental condition. From the information afforded by the last-named document the medical inspector will be able to advise the parents as to the bringing up of the child and also, which is just as important, will be able to intimate to the teachers whether the child is stupid or backward, not from laziness but from defective mental power, the presence of adenoids, deafness, or the like. We believe that some such system exists in some of the British elementary schools but we do not think that any definite system has been brought into working order under the Education Act. Frenchmen are quite accustomed to being entered up in all sorts of official documents but the average Briton detests anything of the kind. However, as successive Governments have determined that all children of a certain age must go to school it seems to us that the only rational thing to do is to formulate some system by which the children may be kept under supervision as regards their health and sanitary condition and so may be kept from bringing about harm either to themselves or to their neighbours. We are quite aware that teachers at present do admirable work in reporting infectious disease at as early a moment as possible but they cannot be expected to have the medical knowledge of a trained medical man.

[1] Comptes Rendus, Jan. 8th, 1906, p. 111.
[2] Ibid., Jan. 22nd, 1906.

THE BACTERIOLOGICAL STANDARDISATION OF MILK.

WE have received a copy of a very valuable report presented to the London County Council by its medical officer, Sir Shirley F. Murphy, on the bacteriological examination of milk in relation to standards by Dr. A. C. Houston. The question discussed is whether bacteriology can reasonably be used for administrative purposes in order to bring about a gradual improvement in the biological qualities of the milk-supply to London. In all 100 samples of milk were examined representing milk from healthy cows taken under conditions of cleanliness, and milk collected from purveyors' shops, dairy shops, churns at railway stations, and from the establishment of well-known milk dealers. To these samples the following tests were applied: a primary and secondary reading of the apparent filth, a microscopical examination of the sediment, and a search for the bacillus coli, the streptococcus, and the bacillus enteritidis sporogenes. As regards the bacillus coli test 60, 50, 15, and 25 per cent. respectively of the samples from purveyors' shops, dairy shops, churns at railway stations, and from well-known milk dealers, infringed the suggested standard. Milks from the same sources amounting to 50, 45, 30, and 25 per cent. of the samples respectively also infringed the standard. As regards the primary reading for sediment 35, 25, 20, and 5 per cent. of the samples respectively infringed the standard and similar results were obtained in the secondary reading of the sediment. As regards the samples of milk taken from healthy cows under clean conditions 10 per cent. of the samples infringed the standard in the case of the bacillus enteritidis sporogenes test; but 40 per cent., 15 per cent., and 35 per cent. were 10, 100, and 1000 times purer respectively when referred to this test than the samples infringing the standard. Moreover, when the bacillus coli test was applied to these samples none of them infringed the suggested standard. On the contrary, 5 per cent., 25 per cent., 40 per cent., and 30 per cent. were 100, 1000, 10,000, and a 100,000 times purer respectively as regards this test than the samples infringing the standard. As regards the volume of sediment and the streptococcus test none of the samples taken in a cleanly manner from healthy cows infringed the standard. Dr. Houston admits that the question of bacteriological standards as regards milk-supply is difficult except in certain directions and in relation to extreme degrees of pollution. Fixed bacteriological standards, even as regards potable waters, he points out, are open to controversy and in respect of milk the matter necessarily introduces considerable

criticism. The fact alone that milk is a nutritive medium for bacteria would seem to render bacteriological standards useless. However, he suggests that all the factors going to constitute a standard or standards need not be subject to the multiplying effect of time and temperature. Such, for instance, would be the determination of the number of pus or blood cells, the volume of apparent filth, the number of spores of bacillus enteritidis sporogenes, and so forth, which may be called non-multiplying factors. Then it is suggested that as an adjunct to the bacteriological standards a temperature standard should be either recommended or actually enforced, as is said to be the case in New York. Milk above a temperature of 50° F. is there defined as adulterated. Lastly, the standards, Dr. Houston thinks might be made so lenient initially and raised so gradually that only grossly contaminated milks would be objected to primarily and no injustice would be complained of. As time went on, and those engaged in the dairy trade more fully realised their responsibilities, the improved condition would allow standards to be raised progressively without damaging the industry. It is obviously desirable that if legislative measures be adopted at all they should be based on bacteriological standards of the completeness and fairness of which there should not be the slightest doubt. Bacteriological standards would certainly be of value if two conditions could be enforced upon the milk trade—viz., keeping the milk at a temperature below 50° F. and observing scrupulous cleanliness in every detail from the time when the milk leaves the udder to the time when it is brought to the consumer.

POWER-GENERATING STATIONS AND THE SMOKE NUISANCE.

BY the introduction of power-generating stations it was calculated that one of the advantages would be that the smoke nuisance would be considerably diminished. We are by no means certain, however, whether after all the result will not simply amount to an accentuation of the nuisance within a relatively confined space which will be equal in its offensive effects to the previous distribution of the same nuisance over a wider area. Complaints have already been made of the offensive out-pourings, for example, of the electrical generating stations of the Underground Railway. It would be idle to suppose that the nuisance arising at the generating stations could be anything like commensurate in its scope with the old smoke nuisance, scattered as it was throughout the tunnels of that line. Yet the offence is none the less because the evil is located and in, so to speak, a concentrated state. In the one case it was diluted and in the other it is concentrated. When welcoming some time ago the very marked improvement in the condition of the air of the Underground Railway after the introduction of electrical trains we remarked that "the pollution arising from the burning of sulphurous coal if it occurs anywhere will be at the electrical generating stations and it behoves the companies concerned to see that the evil so satisfactorily suppressed in one place does not appear at another." It is fairly obvious that the amount of coal consumed for producing sufficient electrical power to maintain the running of trains on the Underground system must be much the same as that which was required for producing steam energy in the old engines. There are probably important economies introduced but at present we do not see any evidence of them in the statements made as to working expenses in the reports of the directors. It follows that unless provision is made for the improved consumption of coal and for the prevention of smoke at the power-generating stations no real advance from a hygienic point of view has been made. The passengers travelling on the line may enjoy an atmosphere free from smoke but the residents in the neighbourhood of the generating stations may be suffering from an intolerable nuisance, representing the concentration of the smoke that before pervaded the tunnels. This is, of course, distinctly bad engineering and, as a matter of fact, there is not the slightest excuse for the production of smoke when the process of generating power is brought within the limits of a single station. The change from horse traction to electric traction on our tramway systems may in this way introduce likely enough the smoke nuisance where, of course, it did not previously exist unless the power-generating stations are so constructed as to preclude the formation of smoke in their furnaces. Yet we learn from a very good source that no less a pioneer of sound hygienic principles and practice than the London County Council itself is a sinner in this respect, and what is really serious is that one of its stations generating electricity for the tramway services south of London threatens the destruction of a national—we had almost written international—institution. We refer to the Greenwich Observatory which has already suffered from the injurious effects of the smoke and hot gases discharged from the chimneys of the power station at Greenwich. No hygienically-minded person or body, least of all the London County Council, would accept, we should have thought, a contract for the construction of a power house unless the plans provided that no smoke would be produced in the furnaces used for steam-raising purposes. There could have been no such stipulation in this case or, if so, the contractor must have failed, for the complaints referred to are made to the Admiralty by no less an authority than the Astronomer Royal. Our point of view is that if the gases discharged from the chimneys of a power-generating station are chemically active enough to affect injuriously the work of the Royal Observatory they must be chemically active enough also to affect injuriously the health of those who happen to reside in the neighbourhood of that station. We hold that not only is the production of smoke unjustifiable but that the escape also of injurious gases which are invisible should be prevented. Chemistry and engineering are not such derelict sciences that they cannot effectually deal with the complete combustion of coal. Perhaps when it is demonstrated that the application of chemical engineering will not only extinguish the nuisance but will produce also a pecuniary gain the hygienic consummation will be speedily reached. The lace manufacturers at Nottingham at all events were thus indirectly induced to keep the air clean and fit to breathe.

ACUTE OSTEOMYELITIS OF THE OS PUBIS.

IN the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of Jan. 14th Dr L. Rocher has reported a case of a very rare condition, which might easily give rise to error of diagnosis—acute osteomyelitis of the os pubis. A girl, aged 13½ years, was admitted into hospital on May 8th, 1905, on account of fever of a week's duration and acute pain in the internal and upper part of the thigh. She had worked on a farm and had always enjoyed good health before her illness which began on April 29th suddenly with pains in the neighbourhood of the right external malleolus. These persisted during the whole day. On the following day pains appeared in the upper and internal part of the right thigh. Nevertheless, she continued to work. Fever developed and a practitioner was consulted who prescribed inunction of mercurial ointment and poultices. Under the influence of rest the pains diminished a little. But later the fever increased and movements became so painful that she could not walk. On admission she was pale and wasted. The temperature was 100·7° F. and the pulse was 100. The right leg was slightly adducted and rotated inwards. The patient sat up in bed with difficulty. The upper and internal part of the

right thigh showed considerable swelling which extended to the labium majus and mons Veneris and obliterated the genito-crural fold. The skin of the part was red and hot and œdematous. There was tenderness along the whole of the rami of the ischium and the os pubis, which was greatest in the middle of this region, the position of the band of cartilage which in adolescents separates the os pubis from the ischium. In spite of the great pain no fluctuating spot could be found. The bone did not appear to be enlarged. Rectal examination showed that the internal surface of the rami of the ischium and the os pubis was more sensitive than on the left side. Passive movements of the thigh, particularly those of abduction, were painful in consequence of the traction which they exerted on the ischium and the os pubis. The evening temperature was 102·7°. The urine contained albumin. Acute osteomyelitis of the ischio-pubic rami was diagnosed. On May 9th under chloroform an incision eight centimetres long was made over the bone along the genito-crural fold. The skin was slightly œdematous. The periosteum was incised down to the bone and detached with a raspatory and at the external border of the bone on the pelvic side a collection of pus containing the staphylococcus albus was found. The pus appeared to have collected behind the descending ramus and the body of the os pubis. The ischiopubic rami were trephined with a gouge but no change could be found in the bone. The abscess extended amid the fibres of insertion of the adductor magnus. In this position the periosteum presented a solution of continuity of the size of a *confetto*. The abscess cavity was washed out with oxygenated water, a drainage tube was passed behind the ischio-pubic rami, and the wound was sutured. There was a slight discharge of pus and the temperature did not begin to fall until the 18th. In the middle of July a lamellar sequestrum was removed. After this the suppuration diminished and recovery ensued. The pubic osteomyelitis was evidently preceded by transitory epiphysitis of the lower end of the right tibia. Dr. Rocher has been able to find only 30 recorded cases of osteomyelitis of the os pubis. Many of these were of puerperal origin and connected with arthritis of the symphysis pubis. In the case related above the osteomyelitis appeared to have commenced near the cartilage which separates the rami of the os pubis and the ischium. The case illustrates the rule that when osteomyelitis occurs in connexion with the primary centres of ossification of the os innominatum it manifests itself at about the time of puberty. On the other hand, when it occurs in connexion with the secondary centres of ossification of the bone it manifests itself later, at about the age of 18 or 20 years.

LONDON INTER-COLLEGIATE SCHOLARSHIPS BOARD.

THE board bearing the above title was constituted in 1904 with the approval of the governing bodies of University College, London, King's College, London, and the East London College, for the purpose of holding a combined annual examination for entrance scholarships and exhibitions tenable at those colleges. The examination for this year will be held in London by the board on Tuesday, May 15th, and following days and the competition is limited to those who have been previously students at any of the colleges except in the case of two Clothworkers' Science Exhibitions and a Sandbrooke Exhibition in Classics tenable at King's College. The value of the scholarships and exhibitions varies from £50 to £20 and the term during which they are tenable from one year to three years. No candidate will be admitted to the examination for these scholarships and exhibitions unless he has passed the matriculation examination of the University of London or any examination accepted by the University in lieu thereof, or is the holder of a school leaving certificate, or is able to furnish some evidence of having had a sound general education which is satisfactory to the board. Should none of the competitors for any scholarship or exhibition show sufficient merit the examiners may recommend that the scholarship or exhibition be not awarded. No student is permitted to hold a scholarship or exhibition concurrently with any other college scholarship or exhibition if the joint value exceeds £50, except with the special permission of the governing body of the college concerned. Successful candidates will be required to enter the college by which they are elected in the October following the examination and to pursue a course of study approved by the authorities of the college. Application should be made to the secretary of the London Inter-Collegiate Scholarships Board, University College, Gower-street, London, W.C., for forms of entry, which must be filled in and returned not later than May 1st, 1906, together with a certificate of age and one of good conduct from the principal of the candidate's last school or other satisfactory reference. Further particulars regarding conditions of award, tenure, and payment may be obtained on application to the secretary.

COMPLIMENTARY DINNER TO MR. HENRY MORRIS.

A COMPLIMENTARY dinner was given on Feb. 20th at the Imperial Restaurant, Regent-street, London, to Mr. Henry Morris by his past house surgeons and dressers on the occasion of his retirement from the post of senior surgeon to the Middlesex Hospital. A large gathering assembled and many telegrams of regret were received from those unable to attend. The chair was taken by Mr. John Ackery who in proposing the health of the guests of the evening referred to Mr. Morris's long connexion with the Middlesex Hospital, to the splendid work he had done in advancing the science and art of surgery especially in respect to the kidney, to the great interest he had always taken in all matters connected with the hospital and its students, and particularly to his munificent gift of £1000 towards the endowment fund for the Middlesex Hospital Medical School. In conclusion, Mr. Ackery asked Mr. Morris to accept a silver tankard of the early Georgian period, together with an antique silver pip-strainer, as a memento of the evening and as a slight mark of the sincere affection and esteem with which he is regarded by all his old pupils. Mr. Morris replied in a charming speech, in the course of which he heartily thanked his entertainers for their great kindness and assured them that he would ever treasure the memory of that evening. The drinking of the health of "The Chairman," proposed by Dr. W. E. Wynter and suitably acknowledged, terminated a most successful gathering.

A COMPARISON OF FRESH AND CONCENTRATED INFUSIONS FROM A PHARMACEUTICAL STANDPOINT.

THE fact that infusions of drugs do not keep good many days led to the introduction of concentrated infusions which have at least the merits of convenience to recommend them. A few formulæ for the preparation of "concentrated solutions" of drugs appeared in the 1898 edition of the British Pharmacopœia, including those of calumba, quassia, rhubarb, senega, and senna. In spite of this official recognition of the principle of using concentrated infusions objections have been raised to their use on the grounds that in many cases they more resemble weak tinctures than infusions and that in all cases the addition of 20 per cent. of alcohol is necessary in order to preserve them. With a view of determining whether concentrated solutions or infusions of drugs are, from a pharmaceutical point of view,

as good as fresh infusions, Mr. E. H. Farr and Mr. R. Wright, pharmaceutical chemists and examiners to the Pharmaceutical Society, have prepared a series of official infusions and a series of concentrated infusions corresponding to them, and the results are recorded in the *Pharmaceutical Journal* of Feb. 17th. Though these investigators at the outset entertained a predilection for fresh infusions they found that in the majority of cases the concentrated infusions were quite as representative of the drugs as were the fresh infusions. In the case of concentrated infusions of broom, cloves (compound), orange, and, to a less extent, buchu and roses, the concentrated preparations were inferior to fresh infusions; on the other hand, concentrated infusions of senna and valerian were superior to fresh infusions. In the case of buchu the difficulty is met with that the drug contains volatile oil and mucilage, both of which are therapeutically valuable. An alcoholic preparation does not dissolve the mucilage; on the other hand, a certain amount of volatile oil accompanies the mucilage into solution in an aqueous infusion. It is satisfactory to know that concentrated infusions, in general, fully represent the drugs from which they are prepared. But as in many cases they can only be prepared by the use of alcohol they cannot, from a therapeutic point of view, be considered as equivalent to fresh infusions. In the case of buchu, at least, it would appear to be better to infuse the broken leaves in water and to preserve the product by the addition of chlororform, dissolved in as little alcohol as possible. An infusion prepared in this way represents as fully as possible the therapeutic constituents of the drug.

THE DEATH-RATE AND PHYSICAL DETERIORATION.

THE recently issued quarterly return of the Registrar-General for the last three months of 1905 shows that the death-rate in England and Wales during last year fell to 15·2 per 1000 of the estimated population in the middle of the year and was lower than in any previous year since civil registration was established nearly 70 years ago. The death-rate last year was exceptionally low in each of its four quarters but the persistently low mean death-rate that has prevailed in England and Wales during recent years, as evidence of the health condition of our population, is still more important than the unprecedentally low rate recorded last year. The English death-rate has been below 17 per 1000 in each year since the close of the nineteenth century, and during the five years 1901–05—the first half of the current decade—the mean annual death-rate has been but 16·0 per 1000. This rate showed a further decrease of 1·7 per 1000 from the rates recorded in preceding five-year periods, which had steadily and successively declined from 22·4 in 1861–65 to 17·7 in 1896–1900. It seems impossible not to recognise in this persistent and steady decline in the English death-rate proof of the national awakening to the importance of hygiene which has in the past 40 years resulted in improved sanitary legislation and has revolutionised the control of local public health. There have been from time to time many attempts to belittle the value of the death rate as a measure of public health and quite recently this remarkable decline in the English death-rate has been persistently ignored by those who assert that the nation is suffering from progressive physical deterioration, apparently losing light of the fact that this steady decline in the rate of mortality implies a steady increase in the mean duration of life of the population. No student of public health can fail to acknowledge the existence of a still distressing amount of physical degeneracy, more especially in our large urban populations, but as the death-rate is declining in nearly all our large towns, as well as in the aggregate of England and Wales, facts militate against the asserted increase of degeneracy At any rate, medical officers of health and sanitary authorities are fully satisfied in regarding this remarkable decline in the English death-rate as an encouraging incentive to the maintenance of their strenuous warfare against all forms of insanitary and degenerating conditions.

TREATMENT OF MENINGITIS BY DRAINAGE.

IN the *Boston Medical and Surgical Journal* of Jan. 25th Dr. E. A. Crockett has published a case of meningitis successfully treated by a method not generally recognised—drainage of the subdural space. A woman was taken to hospital in a semi-comatose state. The history was that she had suffered from otorrhœa since childhood. Nine weeks before admission she had an attack of severe pain in the right ear. Two days before admission headache, which she had had more or less constantly for two months, became very severe and she lost consciousness for about 20 minutes. There were occasional attacks of nausea and vomiting with chills and transient attacks of delirium. On admission she had a "grey" septic appearance and complained of severe occipital, frontal, and right parietal headache. The temperature was 102° F. and there was double optic neuritis. Foul gaseous pus was flowing from the right ear which was filled with a large polypus that projected beyond the concha. Under ether the polypus was removed with a large curette. Much bare bone was felt in the tympanum and a bent probe could be passed into the middle cerebral cavity. A curved incision was made over the auricle with a chisel and rongeur and an opening was made in the skull about two centimetres in diameter. The dura mater bulged and did not pulsate; it was opened and a considerable quantity of cerebro-spinal fluid escaped. Yellow lines of pus were seen running parallel to the vessels on the surface of the brain. The brain was probed downwards, forwards, and backwards to a depth of three centimetres and nothing was found. A gauze drain was placed inside the dura mater and pushed down towards the petrous portion of the temporal bone. The other end was brought out through the flap of skin which was sutured. Rapid recovery ensued. Dr. Crockett believes that many patients suffering from acute suppurative leptomeningitis would recover if they were operated on at once and a drain was placed in the subdural space. The discharge along the drain relieves the increased intracranial pressure which kills most of the patients at once. The mastoid was not opened because the infection seemed plainly to have occurred by the roof of the tympanum and the patient was in such a bad condition that it was not thought justifiable to increase the shock by a second operation.

THE Governor of Bermuda in council has appointed the following duly registered medical practitioners to constitute the Medical Board under the provisions of the Medical Registration Act, 1905 (No. 31), for the purpose of examining the qualifications of persons who may hereafter desire to be registered as medical practitioners in these islands: Eldon Harvey, F.R.C.S. Eng., L.R.C.P. Edin., L.M. Edin.; Dudley Cox Trott, M.B., B.C. Cantab., F.R.C.S. Eng., L.R.C.P. Lond.; and William Eldon Tucker, M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond. The significance of the third name is apparent, for Dr. W. E. Tucker is the gentleman whom a rogue named Daniel Tucker recently impersonated. Daniel Tucker has now gone to prison.

THE medical officer of health of the Cape Colony states that for the week ending Jan. 27th no case of plague occurred in man or other animal at any place in the Colony except at Port Elizabeth where 1 plague-infected rat was found. As regard the Mauritius, a telegram from the Governor received at the Colonial Office on Feb. 16th state

that for the week ending Feb. 15th there were 1 case of plague and 1 death from the disease. At Hong-Kong, for the week ending Feb. 11th, there were 6 cases of plague and 6 deaths from the disease.

IN connexion with the Post-Graduate College the medical staff of the West London Hospital are issuing invitations to a conversazione to be held at the hospital on Wednesday, March 14th. There will be a reception by the Duke of Abercorn, chairman of the hospital, at 8.30 P.M. Music will be provided and there will be an exhibition of pathological specimens.

IT is reported that Mr. Martin Francis Ellis, M.A. Cantab., L.R.C.P. & S. Edin., L.F.P.S. Glasg., of the Nigerian Protectorate Medical Staff, has been severely wounded in the outbreak at Sokoto in which it is feared that five officers have been killed by fanatics.

Mr. Tom Francis Odling, C.M.G., M.R.C.S. Eng., physician to the British Legation in Persia, died from typhoid fever at Teheran on Feb. 17th in his fifty-sixth year.

VOLUNTEER QUARTERING AND EQUIPMENT.[1]

BY FREDERICK CHURCHILL, M.D. EDIN., F.R.C.S. ENG.

IT has long been under my consideration that some such plan as I am about to unfold could be easily developed as a useful extension of the Volunteer movement. I have consulted many of my friends, officers in the army and others, who have expressed their approval of this proposal. No doubt the details of the scheme, if adopted, would require to be carefully threshed out by the authorities at the War Office, but speaking generally I may say that the idea is to enrol in the service all those from the age of 18 to 23 years who are engaged in business during the day between the hours of nine and six but who are in the habit of going out to their homes day by day. Some of our young men toilers in the City live in lodgings which are in a very insanitary condition. Many of them are quite inexperienced youths who having no parental control or guidance are therefore left very much to their own resources for evening occupation. With the growing intelligence of our nation, and the recognition of the value of physical exercises in the development of a healthy manhood, such young men would gladly offer their free will services to their country as loyal subjects to their King during their leisure hours. These hours may be roughly defined as 6 P.M. to 11 P.M. and 6.30 A.M. to 7.30 A.M. each day. The State or some public body would have to provide such volunteers with accommodation in barracks to be erected in suitable strategic positions, within, say, eight or ten miles of our large cities. Similar schemes for the housing of the working classes and clerks have been successfully carried out in connexion with some of our large cities, particularly London, in the form of "Rowton Houses." These we know have been a great financial success. They are always full of men who are just the class that we should want to enrol in the Volunteer movement. In the modification of such a scheme it would be necessary to erect buildings in the form of barracks, with a barrack-yard and a sergeant-instructor who would be engaged to give these young men tactical instruction in the long winter evenings, and who would put them through their drill at suitable hours, either in the morning or in the evening. The only expense which the Government or public body would be concerned in would be the erection and maintenance of such a barrack in a suitable locality. This would serve not only as a local centre for housing our young men but it could be so constructed as to act as a kind of fortification in an elevated and healthy situation to protect the town from attack. It will also be seen that the young men enrolled in this scheme would be saved the expense of lodgings. They would be able to secure good and cheap food at canteen prices at their own cost and would find all conveniences in the form of a club and reading room in the public rooms. It would be necessary to select such strategic points as would be adjacent to a railway station or to tramcars in the suburbs where these young men are accustomed to live.

On the subject of health which in particular concerns me, and for the promotion of manly vigour of our growing youths, I think it cannot be disputed that a three years' service on behalf of our country could be efficiently established on a purely voluntary basis. Of course, during the hours of residence in the barracks the volunteer must be subject to military discipline. Certain it is that even supposing our island home is amply provided for by our navy against any probable landing of a foreign foe, which in itself seems a very dangerous assumption, surely there is a cause and a call for the manhood of our nation to take up the pursuit of arms in the proper defence of the honour and welfare of our country. This not only because it is a most healthful and useful means of developing their physical constitution, but because of what was made very clear during the South African War, that as a nation, owing to the absence of conscription, we are not prepared for a sudden and heavy call upon our home resources for the proper maintenance of our rights and to uphold the honour of our flag in all parts of the King's dominions. Whatever may be said in depreciation of our Volunteers the nation knows well enough that we shall always have to depend upon them in all emergencies as an integral part of our national bulwark of defence. The War Office must always look to our Volunteers as a means for providing additional recruits for the standing army and for enlarging our battalions so as to place them on a war footing in great emergencies.

I now come to the most important part of my proposal—viz., the question of the "sinews of war." How shall these be provided? On this hangs the crux of the whole financial success of the scheme and even of the volunteer movement. No doubt I shall be met at the outset by the inquiry, "Who is to pay the piper?" Undoubtedly it must be those who "call for the tune." The Government would not venture to include in their estimates for the Budget a sum of money to cover this initial outlay. The town councils are too much occupied with their elaborate schemes of municipal trading, gigantic borrowing of money upon the security of the rates for laying down tramways that may be superseded by motor-cars in the near future. Our London County Council is too deeply involved constructing and maintaining river steamers to run during the winter months when nobody cares to go on board. They will certainly stir up the Thames mud but will they dredge up the £50,000 already squandered upon this municipal venture? When shall we, as a nation, acknowledge our unpreparedness for national emergencies? What other nation in the wide world has its thousand miles of coast line utterly unprovided with any means to resist a sudden descent upon our coast by a cunning foe? I have already said that the "Rowton House" system of providing lodging and accommodation in associated dwellings for our young men has proved a financial success. For 6*d*. a day our clerks and mechanics get a comfortable bed in a clean and airy dormitory, with opportunity for cooking their dinner and the use of lavatories and warm baths. Reading rooms and gymnasia are also provided, with attendants in each department. Now suppose we select a convenient site in the suburbs of a large town for the erection of volunteer barracks, having dormitories for the reception of 500 men; also that 50 other large towns decide to erect two such buildings. We have then under daily training and equipment 50,000 of the robust youth of our land in the best possible condition for making them efficient soldiers. The capital being provided by philanthropic effort, the Government would be asked to increase the capitation grant by 6*d*. a day to provide lodging for these 50,000 efficient volunteers. This would amount to £9 2*s*. per annum for each volunteer.

It cannot be doubted that our growing youths just at the period of their development into manhood would gain immensely in physical culture, chest expansion, moral courage, and the virtue of a protected and well-disciplined life. Their intelligence and appreciation of the higher traits of Christian life would be quickened and confirmed. They would pass out of their period of training enriched as citizens, with a finer capacity to use their talents in the service of their country and in the technical arts and crafts where each man seeks to excel his neighbour and gain promotion from his employers. After 22 years' experience as

[1] An abstract of a paper read before the East of Scotland Tactical Society in Edinburgh on Dec. 18th, 1905.

surgeon to a metropolitan hospital I can speak with some authority on the deterioration of the physical condition of our working-class population by reason of the concentration of labourers in urban centres and the consequent depopulation of rural tenements with its resulting poverty and destitution. I have defined the remedy which I consider would be effectual for securing at comparatively small cost a standing army of at least 50,000 volunteers. I have sought to elaborate a scheme by which the young manhood of our nation would be enrolled as skilled troops, prepared for any emergency. I have no hesitation in saying that the improvement in moral fibre, physical development, and fortitude to endure hardness as good soldiers by living together in associated dwellings under strict discipline would be an immense gain to the nation. In addition to this they would have regular hours, well-cooked food, tactical instruction, and gymnastic exercises. The rising generation of young men may cheerfully accept such conditions of service and enrol themselves as volunteer troops. The future fathers of the nation would be sent back to their homes in vigorous health to make room for the next generation of youthful aspirants for volunteer quartering and equipment.

THIRTEENTH ANNUAL REPORT (FOR 1904) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

II.[1]

CONTINUING our review of Sir Shirley F. Murphy's report we notice that, probably in consequence of the exceptional degree of public and professional attention now directed to the prevention of pulmonary tuberculosis, a larger space than usual is devoted in the present report to the behaviour of that scourge in the metropolis. The administrative county of London of the present day may usefully be compared with the London of the past under vestry jurisdiction, because by such comparison we learn from the report the reassuring fact that a marked diminution has recently taken place in the mortality from pulmonary tuberculosis, the history of which mortality has been carefully traced through successive periods of the last half century. From a comparative table we find that in the first decennium, 1851–60, the mortality stood at the rate of 2·86 per 1000 living; that in the next three decennia it fell steadily through rates of 2·84, 2·51, and 2·09 per 1000, and that in the decennium last ended it reached the lowest figure—namely, 1·84 per 1000. Since the opening of the present century the fall in mortality has continued, the rate averaging 1·60 per 1000 in the period since elapsed. Referring to the impossibility of correcting the rates for the earlier decennia, Sir Shirley Murphy advocates caution in comparing them with the rates for recent years. Bearing in mind that Koch's discovery of the tubercle bacillus was not given to the world until the decennium 1881–90 and that before that date the microscope was of little service for the diagnosis of pulmonary tuberculosis, it is unsafe to assume that the difference between the earlier and the later death-rates, as shown in the tables, represents the actual fall in the mortality of that disease. Sir Shirley Murphy, however, is of opinion that there has been substantial decline in recent years. Accepting the figures obtained from the registration of deaths it appears that with slight exceptions the London death-rate from this disease has been greater than that of the country generally. Both in England and Wales and in London the decline has been much greater among females than among males, but this has been specially marked in England and Wales, where in 1851–70 the female mortality at all ages was higher than the male, whilst in 1891–1900 it was lower, whereas in London the male mortality was highest throughout the half century. In order to obtain an accurate expression of the mortality from this disease in the several sanitary areas under his supervision, Sir Shirley Murphy has been at the pains to correct the death-rates of each of the 29 metropolitan boroughs, first, by distributing the institution deaths to the localities from which the patients had been removed, and then by recalculating the several rates on a uniform population basis—namely, that of the age and sex constitution of the administrative county as a whole. In a table illustrating the aforesaid method of correction we note that if the mean metropolitan death-rate be taken at 1000 the borough rates range from 506 in Hampstead and 568 in Lewisham to 1379 in Stepney and in Bermondsey, 1401 in Shoreditch, 1451 in Bethnal Green, 1457 in Southwark, and 1549 in Holborn; the last borough had in the three previous years also possessed the highest death-rate in London, the mortality there having exceeded the mean rate for the administrative county by not less than 64 per cent. It thus appears that certain large and populous areas of the metropolis suffer from pulmonary tuberculosis more than three times as heavily as do other areas only a few miles distant. Familiar as he is with the character of the several populations, the county medical officer with these figures before him could scarcely escape the conviction that pulmonary tuberculosis is largely a disease of poverty.

Evidence is accumulating to the effect that advanced cases of the disease may act as centres for the distribution of infection amongst relatives and others intimately associated with the sufferers, especially in crowded tenements where separate sleeping accommodation for the sick cannot be provided. For example, Dr. F. J. Allan, the medical officer of health of Westminster, contrasting the influence of heredity with that of direct infection as factors in the spread of the disease, reports that of 18 cases with a history of tuberculosis in a previous generation ten had been in contact with tuberculous relatives; and of 54 cases without history of hereditary tuberculosis 20 had been in contact with tuberculous members of the family and four in contact with other tuberculous associates. Again, Dr. G. Newman, the medical officer of health of Finsbury, reports that of a considerable number of deaths occurring in that borough from pulmonary tuberculosis 44 per cent. were infected by relatives. Following the lines of investigation suggested many years ago by Dr. Arthur Ransome, at that time of Manchester, Dr. Newman gives statistics of the number of successive cases occurring in the same house and shows that in a single year 79 deaths occurred in houses already infected with the bacillus; he further states that 18 cases were reported in houses where there had been no less than five previous cases. Yet again, Dr. S. Davies of Woolwich attributes infection in 100 out of 186 notified cases to the following causes: to contact with relatives in 41 cases, with lodgers in 24 cases, and to infection in public-houses in 35 cases. With the object of comparing the incidence of pulmonary tuberculosis on poor populations with that on populations in better circumstances, Sir Shirley Murphy has arranged the sanitary districts of London in groups on the basis of the population living more than two together in tenements of less than five rooms. From a table in his report we learn that whilst in districts where the proportion of overcrowding estimated as before mentioned does not exceed 7½ per cent. the death-rate from this disease was only 1·13 per 1000, on the other hand, in districts overcrowded to the extent of 27 per cent. or more the rate was 2·12 per 1000. In other words, the inhabitants in the latter areas perished little short of twice as fast as those in the former.

Adopting the generally accepted view respecting the direct communicability of pulmonary tuberculosis the London County Council has already taken important steps for its prevention. For instance, a by-law has been issued forbidding expectoration on the floors or walls of public conveyances and of public buildings generally. Efforts are constantly being made to teach sufferers from pulmonary tuberculosis to expectorate into suitable receptacles and metropolitan sanitary authorities are encouraging the reporting to their medical officers of cases of the disease. The system of voluntary notification as recommended in 1904 by the conference of sanitary authorities at the London County Hall has already been adopted by 18 out of the 29 sanitary authorities of the metropolis, and perhaps largely because it is voluntary, the system appears to be working satisfactorily, although hardly to the extent desirable. In certain districts complaint is made that much of the value of notification is lost owing to the circumstances that the worst cases alone are notified, and these not until they are in an advanced stage. The sufferers notified are visited and advised concerning such precautions as are

[1] Continued from THE LANCET of Feb. 10th, p. 395.

practicable in their homes and in the event of the patients' removal or death the premises are properly disinfected.

The insufficiency of hospital accommodation for the reception of cases of pulmonary tuberculosis is the subject of general comment in the report. For example, the medical officer of health of Stoke Newington reports that in his district it frequently happens that a patient in the last stage of the disease has had to share a room with several others. In such cases, he says, "No suggestion that I was able to offer could do away with the enormous risks the other occupants were daily called upon to face." Again, the medical officer of health of Woolwich, discussing the same question, points out that when the patient is the breadwinner his illness means cessation of wages and he consequently goes destitute to the infirmary. But in cases where the patient is the wife of the breadwinner she is not pauperised and may or may not be removed to hospital, in which latter case she remains at home and probably infects other members of the family. It is therefore suggested that until special provision is made boards of guardians should assist sanitary authorities to provide facilities for the removal from home of advanced cases of the disease. Commenting further on this subject Sir Shirley Murphy argues that in London the need is urgent for bringing institutional treatment into relation with the home necessities of the sufferers, and that so far as there may be dearth of institution accommodation there is need for careful selection of the worst cases for removal, the object being to protect those associated with the patient in his home even more than to benefit the sufferer himself. In this sense he regards treatment in institutions instead of at home as a measure of the first importance as a preventive measure.

As regards the prevalence in the metropolis of malignant disease the present report gives a less satisfactory account than it does concerning the behaviour of the disease last mentioned. In the ten years 1851–60 London lost by cancer 42 of its inhabitants out of 100,000 living, whereas in the ten years 1891–1900 the proportional loss was 85 in the same number living. In other words the fatality of this disease has more than doubled within the half century. Nevertheless, we may derive some little consolation from the fact that in the year 1904 there was a slight fall in the crude mortality as compared with that of the year immediately preceding, whilst if the rates be adjusted for age constitution of the population it appears that the rate of cancer mortality has remained stationary at 92 per 100,000 throughout the last four years. This statement will be the more welcome to Londoners in view of the less satisfactory fact that during the same four years the cancer death-rate of England and Wales has gone on increasing steadily and not by any means slowly. In order to show with greater accuracy the incidence of cancer on the dwellers in the several sanitary areas Sir Shirley Murphy has applied correcting factors to the crude rates of those areas and in a table in the report has printed the corrected side by side with the uncorrected or crude rates. It must here be mentioned that the London Government Act of 1899, which established municipal boroughs in place of the former vestries, effected changes in the boundaries of the sanitary areas, so that the death-rates since 1900 are the only ones available for comparison. But it can be seen from the figures relating to those years that differences in the age and sex constitution of the population are partially responsible for differences in the crude rates obtaining in the several districts. From this table we learn that in 15 of the sanitary areas the rate of cancer mortality has increased in 1904 as compared with the average rate in the previous three years, whilst in the remaining areas it has either decreased or has remained stationary. With the object of ascertaining whether cancer exhibits the same tendency as that shown by pulmonary tuberculosis specially to oppress the poorer classes the sanitary districts of London have again been grouped to show the amount of overcrowding locally prevalent, the cancer death-rates being shown in relation to the proportion of apartments tenanted by more than two persons. An instructive table in the report shows clearly that the incidence of fatal cancer in no way corresponds to the incidence of mortality from pulmonary tuberculosis, which latter appears to be governed largely by the social condition of the population. For the reassurance of those who are humanely solicitous for the care, medical treatment, and solace of the unfortunate sufferers from cancer amongst the poor we may properly quote the concluding remarks of Sir Shirley Murphy on this point. "As between the accuracy of cancer diagnosis among the rich and the poor there may," he says, "be differences due to the greater ability of the former class to pay for skilled advice; but in this connexion it must be recollected that in London, where public institutions are within reach of all, any difference of this sort must be largely compensated, or more than compensated, by the greater use of these institutions by the poorer classes."

THE FAMILY CARE OF THE INSANE.

IN THE LANCET of Feb. 3rd, p. 343, it was mentioned that at a meeting of the Aberdeen, Kincardine, and Banff Association of Inspectors of Poor, which was held in Aberdeen on Jan. 27th, Dr. Charles Macpherson of Edinburgh, Deputy Commissioner in Lunacy for Scotland, read a paper on the subject of "The Family Care of the Insane, more particularly with reference to its present position and possibilities of development in Aberdeen, Kincardine, and Banff." He said that this manner of providing for the pauper insane had been in use in Belgium for several centuries and had been under State supervision there for a long time. It was also largely and increasingly used in France and Germany, and to some extent in all the other countries of Continental Europe. As a system of care it had as yet no official recognition in England, although there were several thousand insane persons living with relatives, and sometimes with strangers and supported by the rates, but they were under no official supervision beyond that of the relieving officer and the medical officer, in common with the other paupers of the district. Efforts were being made to remedy this state of matters and last year the British Medical Association appointed, as a commissioner, a well-known medical authority who visited several of the continental colonies as well as many of the boarded-out cases in Scotland. He also visited many districts in England and saw how the insane, not in asylums, were provided for, and the interesting report which he published was far from being creditable to the present condition of the boarded-out pauper insane in England. In Scotland their system differed in one fundamental respect from all the continental ones. There the care of the insane was undertaken by the State, while here it was undertaken by the parish. Consequently the plan there had been to have large colonies planted out in a comparatively small space with a central hospital to which cases which broke down could be removed and where there was a regular asylum staff of medical men, nurses, and attendants. In Scotland, owing to their parochial administration, this system would be impracticable and the object aimed at was to remove from asylum care only such patients as were no longer likely to derive any benefit from treatment, who were in good general health, were in no way dangerous either to themselves or others, and whose conduct, under judicious care, was not likely to cause annoyance to the general public. Supervision was intentionally kept in the background as much as possible and was no more than was required to secure that the patients should be treated with kindness, be well fed, kept clean, and suitably clothed. This system had much to recommend it and had now been sufficiently long on trial to place beyond all doubt its suitability in properly selected cases. It was a humane system. The experience of all inspectors of poor who had tried the boarding-out system largely, as well as the testimony of all the visiting commissioners during the past 48 years, showed that the vast majority of the patients were grateful for their release from the necessarily somewhat irksome routine of asylum life, and that although most of them were not so luxuriously housed as they were in the asylum and in many cases not so well fed, they were healthier and happier in their comparative freedom, and the death-rate was lower than it was in the asylum. The change often undoubtedly helped towards recovery, for there were every year a certain number of those supposed incurable cases certified as recovered and removed from the roll, and a much larger number who, though not recovered, showed marked mental improvement. These were the experiences not only of Scotland but also of the oldest continental colony, Gheel in Belgium. The removal to a private home of every patient who did not require further asylum

treatment was therefore a humane action and was a duty devolving on those who were intrusted with the care of the patients. The boarding-out system was not only humane but economical From the latest statistics in his possession the average cost for maintenance in private dwellings in Scotland was 6*s.* 11*d.* per week; in asylums it was 10*s.* 7*d.* But in estimating the cost in asylums it was necessary to add to it the assessment per head for land and buildings, which last year averaged 3*s.* 5*d.* It was thus seen that the cost per head outside was as near as possible one-half of the cost in the asylum. But from the economic point of view the free removal of unrecovered patients had a much further reaching effect than this, for very many of these ceased to be chargeable to the rates at all. Their relatives, while quite unable to pay the asylum rate of board, could nevertheless feed and clothe them and consequently did not ask the parish for any assistance. During 1904 there were 470 patients discharged in this way from Scottish asylums, and of these 263, or about 56 per cent., ceased to be chargeable. It was much to be regretted that so little was done in this way in the counties represented by the association. He had a note of the numbers discharged unrecovered during the five years from May, 1900, to 1905. Aberdeenshire discharged 75, of whom only 16 remained chargeable; Kincardineshire discharged 11, of whom two remained chargeable; and Banffshire discharged 34, of whom 15 remained chargeable. But there was yet another side to the economics of the system—namely, the benefit derived by small farmers from the work of those patients while under their care. In several districts in Scotland a considerable amount of waste land had been reclaimed, largely by the assistance of patients, and in the old colony of Gheel the land, which was now a garden, was notorious as being formerly a barren wilderness and the inhabitants regarded their present prosperity as a reward for the charity of their ancestors towards the mentally afflicted who contributed so largely to its reclamation. He was sure that there were many small farmers in each of the counties represented by the association to whom the presence in their houses of one or two patients, who could assist them with a little light work, would make all the difference between poverty and moderate comfort.

Some practical questions still remained. One of them was to what extent was the system of family care applicable and whether full advantage was taken of it. Although he believed that in the Belgian colony of Gheel all sorts of cases, acute and chronic, were treated with considerable success, no one in Scotland had ever suggested that the family care was adopted for all cases and that consequently there was no need for asylums. But of recent years the idea was growing that the asylum should be regarded as a hospital for the curative treatment of mental diseases and in increasing the numbers removed from asylum to family care the realising of this ideal would be assisted. In addition to those acutely ill and requiring medical treatment there would always be a considerable number who, from the nature of their delusions, might be dangerous to themselves or others or be a public nuisance; some who were so demented that a life of comparative freedom would be no pleasure to them; and some whose general health unfitted them for life in homes where medical care and nursing were not constantly available. But outside of these classes there was a very large number of cases, both of congenital and acquired insanity, filling the wards of asylums, who would be far better in private homes. The numbers at present boarded in families in Scotland represented, as nearly as possible, 20 per cent. of the pauper insane. The proportions varied very much in different counties, from 45·3 per cent. in Caithness to 2·5 per cent. in Peebles. Three counties thus provided for over 40 per cent. of their insane, four for over 30 per cent., and six for over 20 per cent., and it was worthy of note that these 13 counties which thus provided for large numbers were at least as free from accident and undesirable events as those which kept most of their insane within asylums. From the experience of these counties, as well as of many individual parishes, which for many years had boarded out even a larger proportion of their insane, he had no hesitation in expressing the opinion that quite one-third of the pauper insane of Scotland might very suitably be provided for in this manner. Banffshire for many years had provided thus for a considerable number of its insane and on Jan. 1st last year had 28 per cent. of the total insane in private dwellings. In Aberdeenshire, however, only a little over 10 per cent. of the insane were in private dwellings and in Kincardineshire only 8 per cent. In conclusion, Dr. Macpherson strongly recommended those who had no special experience of boarding out to visit a few houses where patients had been received for some time and he knew of no better example within easy reach than the colony in the parish of Deskford, near Cullen, in Banffshire.

MEDICINE AND THE LAW.

The Labour Laws in their Medical Aspect.

THE *Law Journal* in a note upon the legislation of recent years affecting the labouring classes at home, in our colonies, and abroad ascribes the passing of laws of this class to various causes and lays stress, among these, upon the humanitarian spirit of the age which compels the employer to benevolence towards his servants. With reference to the expediency of such legislation, our contemporary aptly observes that the welfare of the State has no meaning apart from the welfare of those who compose it, and that a population worn down by excessive toil, by insanitary conditions, or by overdrafts on its youth means national decay. The organisation of labour is another of the causes to which is ascribed naturally the promotion of laws on behalf of workers and the part which such organisation plays in stimulating benevolence may be traced in the rough classification of labour legislation in seven groups which the *Law Journal* suggests. Under this the Factory Acts and similar measures securing hygienic conditions for the worker, whether man, woman, or child, during the hours of employment constitute a class by themselves. Another contains laws securing their wages to workers of which the Truck Acts are examples. The third class provides against the risks incidental to employment and tends to the insurance of the worker at the expense of the employer. In the fourth class are placed laws fixing minimum rates of wage, such as are to be found exemplified in Australia. Under the fifth are included Acts well known in our colonies providing boards of conciliation and similar tribunals for the regulation of disputes between masters and men. Sixthly, there are measures, so far confined to Switzerland, for procuring employment for the unemployed—a class of labour legislation to which apparently Parliament before long may be invited to contribute. Seventh, and last, come such laws as provide for the workman at home, including Workmen's Dwelling Acts and Homestead Acts, of which the last named can be studied in some of our colonies. These aim at preventing the worker's home from being broken up when he gets into financial difficulties by protecting it against the execution creditor. It will be seen from the above list and from the particulars which the *Law Journal* has added in explanation that in labour matters, as in many other subjects of legislation, it is not necessary when introducing novel measures to do so altogether in the dark, but that the experience of our colonies and of foreign countries may often be of benefit to us if only in showing the dangers to be avoided. It may also occur to those who study the points with which the legislature of this country has already occupied itself, that although humanitarianism may be the agency which has brought about measures, hygienic and sanitary, of extreme importance the absence of the stimulus applied by labour organisations accounts for conditions which we all deplore when they are brought to our notice. Attention has been attracted recently by a case in which a woman applied to the Lambeth guardians for outdoor relief. Her employment, that of finishing uniforms to be worn by volunteers, earned for her in three successive weeks 3*s.* 0½*d.*, 3*s.* 9*d.*, and 5*s.* 0½*d.*, her work being remunerated at the rate of about 1½*d.* per hour. This appears to have been work done in a factory for contractors, and there are many women working at home who think themselves lucky if they can make 1*s.* a day by ceaseless labour far exceeding the eight hours' limit asked for in well-paid employments by men backed by powerful trade unions. It would be interesting to know what class benefits by the cheap clothing manufactured at starvation rates by helpless women and how far the fact that it is worn by working men and by their families contributes to the maintenance of conditions which in some spheres of labour would be looked upon as intolerable. It is idle to congratulate ourselves upon labour legislation as likely to promote the physical welfare of the nation at large when it leaves untouched a

substantial portion of the working classes and when in such cases of women's labour as those referred to the mothers of future citizens are left to toil in circumstances wholly incompatible with healthy living. At the same time, it must be conceded that the alteration of such conditions presents a problem of enormous difficulty, which may occupy the ingenuity of many generations before it is solved. The attention of the House of Commons has now been directed to it and it is to be hoped that it will not be allowed to lie dormant again.

Blended Butter.

A fine of £5 with £40 costs has been inflicted at Clerkenwell on Messrs. Coopman and Young of West Smithfield in respect of the sale of butter to which was applied the description, "Excelsior guaranteed pure butter." The magistrate decided upon the evidence before him that it was blended butter and adjourned other summonses against the defendants in view of an intended appeal.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Feb. 23rd, 1828.

THE YELLOW GOTH made his first appearance in the Court of King's Bench on Monday last. The poor fellow obtained FIVE POUNDS at our expense, and a GENERAL LAUGH at his own.

" . . . . Si quis
Opprobriis dignum laceraverit, integer ipse;
Solventur risu tabulæ."

Mr. W. JONES, of Lutterworth, has transmitted the details of a case of fracture of the skull, exceedingly interesting in a *moral*, as well as *surgical* point of view. The patient, according to Mr. Jones's statement, becoming "much cleverer" than he was before the accident.

He was a lad 17 years of age, and the accident occurred from the wheel of a wagon having passed over the head. The right parietal and temporal bones were much fractured, the integuments greatly torn, and part of the substance of the brain forced out. There were all the symptoms of compression, which ceased on the removal of several portions of bone by means of the elevator: five or six pieces had been driven into the substance of the brain. Under strict antiphlogistic treatment, the lad entirely recovered, and Mr. Jones remarks, that he "had lost sight of him" for five or six years, when he accidentally met the mother, who informed Mr. Jones, that, previously to his taking out a part of her son's brains, the lad was never free from headach, and that he was so stupid, he could scarcely recollect anything; but that since the operation he had been entirely free from headach, and had become "*as sharp as a briar!*"

It would seem from this case, that a redundancy of brain is equally unfavourable to the development of mental manifestations as a lack of it. We almost fear, that in making this case public, some numskull, fancying he has a superfluity of cerebral substance, may be induced to try the experiment of crushing his cranium.

Mr. Jones also relates an instance of successful recovery from severe wound of the foot by an axe, in which the four innermost metatarsal bones were divided, as well as all the soft parts; the tendons and metatarsal bone of the little toe being, in fact, the only parts remaining entire. Mr. Jones affirms that the patient was cured, and has perfect use of the foot.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8903 births and 5214 deaths were registered during the week ending Feb. 17th. The annual rate of mortality in these towns, which had been 15·5 per 1000 in each of the two preceding weeks, increased last week to 17·2 per 1000. In London the death-rate was 16·8 per 1000, while it averaged 17·4 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 8·4 in Hornsey, 9·0 in Grimsby, 9·3 in Leyton and in King's Norton, 10·4 in East Ham, 10·8 in Burton-on-Trent, and 10·9 in Willesden; the highest rates were 21·5 in Walsall and in South Shields, 21·6 in Plymouth, 21·8 in Warrington, 22·0 in Stockport, 22·3 in Merthyr Tydfil, 23·7 in Bootle, 24·2 Preston, and 25·8 in Swansea. The 5214 deaths in these towns last week included 446 which were referred to the principal infectious diseases, against 385, 365, and 400 in the three preceding weeks; of these 446 deaths, 149 resulted from whooping-cough, 117 from measles, 61 from diphtheria, 53 from diarrhœa, 43 from scarlet fever, and 23 from "fever" (principally enteric), but not any from small-pox. No death from any of these infectious diseases was registered last week in Willesden, Hastings, Northampton, Ipswich, Great Yarmouth, Burton-on-Trent, Handsworth (Staffs.), King's Norton, Smethwick, Grimsby, Birkenhead, Halifax, or Tynemouth; while they caused the highest death-rates in Plymouth, West Bromwich, Leicester, Derby, Bury, Oldham, Burnley, Blackburn, Preston, and Stockton-on-Tees. The greatest proportional mortality from measles occurred in Tottenham, Wolverhampton, Bury, Preston, Leeds, York, and Swansea; from diphtheria in Stockport and in Oldham; from whooping-cough in Bournemouth, Reading, West Bromwich, Leicester, Warrington, and Burnley; and from diarrhœa in Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. No death from small-pox was registered last week, either in London or in any of the large provincial towns. Two cases of this disease were admitted into the Metropolitan Asylums Hospitals last week and remained under treatment at the end of the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2983, 2912, and 2839 on the three preceding Saturdays, had further declined to 2734 on Saturday last, Feb. 17th; 281 new cases were admitted during the week, against 322, 319, and 283 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 293, 313, and 278 in the three preceding weeks, rose again to 289 last week, but were 139 below the corrected average number in the corresponding periods of the four preceding years. The causes of 63, or 1·2 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, Hull, and in 44 other large towns; while the largest proportions of uncertified deaths were registered in Willesden, Reading, Hanley, Burton-on-Trent, Birmingham, Liverpool, St. Helens, Warrington, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 19·6, 16·5, and 16·8, per 1000 in the three preceding weeks, further rose to 18·0 per 1000 during the week ending Feb. 17th, and was 0·8 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·4 in Aberdeen and 13·6 in Perth, to 22·1 in Dundee and 25·1 in Greenock. The 618 deaths in these towns included 34 which were referred to measles, 10 to diarrhœa, nine to diphtheria, five to whooping-cough, four to scarlet fever, and two to "fever." In all, 64 deaths resulted from these principal infectious diseases last week, against 47 in each of the two preceding weeks. These 64 deaths were equal to an annual rate of 1·9 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 18 in each of the two preceding weeks, increased last week to 34, of which 25 were registered in Glasgow, five in Edinburgh, two in Dundee, and two in Paisley. The deaths from diarrhœa, which had been 13, 18, and 15 in the three preceding weeks, further declined to ten last week, and included four in Glasgow and four in Aberdeen. The fatal cases of whooping-cough, which had been six and four in the two preceding weeks, rose again last week to five, of which two occurred in Glasgow and two in Dundee. The four deaths from scarlet fever were slightly in excess of the number in the preceding week. The two fatal cases of "fever" included one of typhus, and both were registered in Glasgow. The deaths referred to diseases of the respiratory organs

in these towns, which had been 110, 113, and 108 in the three preceding weeks, rose again last week to 134, and were 15 in excess of the number in the corresponding period of last year. The causes of 18, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·2, 24·4, and 20·5 per 1000 in the three preceding weeks, further declined to 19·0 per 1000 during the week ending Feb. 17th. During the past four weeks the death-rate has averaged 21·3 per 1000, the rates during the same period being 15·5 in London and 17·6 in Edinburgh. The 138 deaths of persons belonging to Dublin registered during the week under notice were 11 below the number in the preceding week and included one death from diarrhœa, but none from small-pox, measles, scarlet fever, diphtheria, whooping-cough, or "fever"; in the three preceding weeks the deaths referred to these principal infectious diseases numbered five, five, and one. The mortality from diarrhœa in Dublin last week was equal to an annual rate of 0·1 per 1000, the death-rates during the same period from the principal infectious diseases being 1·4 in London and 1·2 in Edinburgh. The 138 deaths in Dublin last week included 15 of children under one year of age and 44 of persons aged 60 years and upwards; the deaths of infants showed a decline, while those of elderly persons were equal to the number in the preceding week. No death from violence was recorded, but four inquest cases were registered; and 45, or nearly one-third, of the deaths occurred in public institutions. The causes of six, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon R. E. Biddulph to the *Cressy*. Staff Surgeon E. T. Meagher to the *Berwick*; on recommissioning. Surgeons: F. Hernaman-Johnson to the *Berwick*; L. F. Cope and L. C. Rowan-Robinson to the *Victory*.

The undermentioned gentlemen have been appointed Surgeons: Leonard Warren, Ewen Cameron, Louis Leisler Greig, Frederick George Goble, Reginald Charles Pattisson McDonagh, Percy Frank Minett, Herbert Acland Browning, Percy Charles Woollatt, and John Bourdas (dated Feb. 10th, 1906).

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon William Edward Bennett has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated Feb. 17th, 1906).

The following promotions have been made, viz.:—Deputy Inspector-General of Hospitals and Fleets Henry Thompson Cox to be Inspector-General of Hospitals and Fleets. Fleet Surgeon James O'Brien Williams to be Deputy Inspector-General of Hospitals and Fleets (dated Jan. 25th, 1906).

ROYAL HORSE GUARDS.

Surgeon-Major Hugh Rayner to be Surgeon-Lieutenant-Colonel (dated Jan. 30th, 1906). Surgeon-Lieutenant-Colonel Hugh Rayner retires on retired pay (dated Feb. 17th, 1906).

ARMY MEDICAL SERVICE.

Lieutenant-Colonel William G. Macpherson, C.M.G., R.A.M.C., to be a Deputy-Assistant Director-General (attached to the Department of the Director of Military Operations) (dated Dec. 29th, 1905).

ROYAL ARMY MEDICAL CORPS.

Major Hubert A. Bray, from the Seconded List, to be Major (dated Feb. 14th, 1906). Lieutenant Charles V. B. Stanley is seconded for service with the Egyptian Army (dated Jan. 26th, 1906).

The undermentioned Lieutenants are confirmed in that rank:—William Byam, Herbert St. M. Carter, George W. Heron, John M. B. Rahilly, John A. Anderson, Hugh G. Sherren, Henry H. A. Emerson, Rowland P. Lewis, James H. Graham, Wallace Benson, George E. Ferguson, Charles E. W. S. Fawcett, Alexander M. Rose, Griffith H. Rees, Thomas Scatchard, Vivian H. Symons, Edward G. Anthonisz, Ronald A. Bryden, Edward L. Moss, Arthur E. S. Irvine, Thomas B. Moriarty, Michael B. H. Ritchie, Walter J. Weston, Albert E. F. Hastings, Mortimer J. Cromie, James S. Dunne, Edmund T. Potts, George W. W. Ware, William McConaghy, Wilfrid C. Nimmo, Michael Keane, Charles F. White, Francis C. Sampson, Thomas S. Blackwell, Harold E. Priestley, Philip J. Marett, Arthur D. O'Carroll, Alan C. Vidal, and Hugh Stewart. The undermentioned gentlemen to be Lieutenants on probation (dated Jan. 30th, 1906): Charles Milligan Drew, Archibald Alfred Sutcliff, Arthur Gordon Cummins, Alfred Sutton Millard, Hugh Evelyn Gotelee, Archibald Smith Littlejohns, Frank Alexander McCammon, William Rickards Galwey, Robert George Archibald, George De la Cour, William Egan, Frank Forrest, Timothy William Octavius Sexton, Robert George Hetherington Tate, Augustus Scott Williams, Alexander Dawson, Clive Thornley Edmunds, Valentine Goode Johnson, Ernest William Mynall Paine, Edward John Porteous, Edward Michael O'Neill, Victor Cyril Honeybourne, James Clarence Ledeatt Hingston, Georgie Bennicke Edwards, Frederick Duke Gwynne Howell, Charles Reade Monroe Morris, Patrick Sampson, William Harold Gillatt, John Walter Lennox Scott, William Clayton Smales, John Browne Grogan Mulligan, Arthur Herbert Bond, Marcus Graham Dill, Richard Ernest Upton Newman, Harold Jacques, Donald De Courcey O'Grady, Thomas Trevor Hull Robinson, Thomas Christie Cyprus Leslie, Lawrence George Gibson, and Philip Smyly Stewart. The undermentioned Lieutenants to be seconded under the provisions of Article 349, Pay Warrant (dated Jan. 30th, 1906): Hugh E. Gotelee, George De la Cour, Augustus S. Williams, Valentine G. Johnson, and John W. L. Scott.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Lieutenant (Honorary Lieutenant in the Army) J. C. Taylor to be Surgeon-Captain (dated Feb. 17th, 1906); 2nd Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Lieutenant-Colonel R. T. C. Robertson is granted the honorary rank of Surgeon-Colonel (dated Feb. 16th, 1906; Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel R. T. C. Robertson resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated Feb. 17th, 1906); 2nd Volunteer Battalion the Durham Light Infantry: Alexander Charles Farquharson (formerly Lieutenant) to be Surgeon-Lieutenant (dated Feb. 17th, 1906).

LORD ROBERTS'S MANIFESTO.

Lord Roberts, as President of the National Service League, has issued an important manifesto to the nation with the view of removing any misconception as to the attitude of that body and of placing before the public a clear outline of its policy. We as medical journalists are chiefly concerned with his proposals as regards the acquisition of a knowledge of the use of the rifle in schools to be followed subsequently by a short period of compulsory military drill, measures which are capable of being turned to excellent account in various ways and especially in improving health and physique and in inculcating a sense of duty, obedience, and discipline in the rising population. The manifesto says: "(1) To insure peace and security for the British Empire by organising our land forces in such a manner that we may not only be able to defend successfully any portion of the empire against attack but also that the strength of our defensive arrangements may render any attack improbable. 2. To improve the moral and physical condition of the nation and thereby to increase its industrial efficiency. With a view to attaining these two objects, the league advocates that, subject to certain exemptions to be defined by law, including those necessary to provide for the requirements of the navy and mercantile marine, every man of sound physique, without distinction of class, shall be legally liable during certain years of his life to be called upon for service in the United Kingdom in case of emergency. In order to fit him for this duty he shall be legally obliged to undergo three or four months' military training when he arrives at the military age. This limited amount of training can, however, only be effective if as much military instruction as possible has been given to all boys previous to their reaching the military age. Such instructional training will, moreover, have a beneficial

effect on the moral and physical condition of the population at large."

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS), LONDON COMPANIES.

On Feb. 17th, at the headquarters of the Royal Army Medical Corps (Volunteers), Calthorpe-street, London, W.C., Colonel A. T. Sloggett, C.M.G., R.A.M.C., principal medical officer of the London district, distributed the prizes gained during the past year by the members of the corps. Lieutenant-Colonel V. Matthews, the commanding officer, presided, and in the course of his annual statement said they had again to deplore a falling off in their numbers, the strength having been reduced during the year from 332 to 305. Colonel Sloggett referred to the excellence of the work done by the corps, which he had inspected for the past three years.

THE CHARACTER OF THE GUNSHOT WOUNDS IN THE LATE WAR BETWEEN RUSSIA AND JAPAN: VIEWS OF RUSSIAN SURGEONS.

Writing in the *Vratch*, No. 5 of 1905, Dr. N. Cholin gives particulars regarding 230 cases of gunshot wound which came under his personal observation in Manchuria during the late war. In his opinion the Japanese rifle bullet "fulfils all the conditions of a humanitarian projectile." 6·5 millimetres in diameter, it weighs 10·5 grammes, and has an initial velocity of 725 metres to the second, whereas in the Russian rifle bullet the diameter is 7·5 millimetres, its weight is 13·7 grammes, and it has an initial velocity of only 620 metres. Owing to its high velocity the Japanese bullet was seldom found distorted and its penetrating power was so great that the wounds it caused were almost always rectilinear. The orifice of entrance usually resembled a slit in the skin and was slightly smaller than the projectile. The orifice of exit closely resembled it, so that at times it was difficult to distinguish the one from the other. Dr. Cholin never found fragments of clothing or any other foreign matter in the wounds. The holes left in the clothing resembled clean cuts with a sharp knife. For this reason, he says, primary suppuration was rare and cicatrisation always supervened rapidly and without reaction. In the next place Dr. Cholin discusses the character of gunshot wounds in relation to the various regions of the body implicated, and, in conclusion, gives a sketch of the medical arrangements which he stigmatises as extremely defective. Lack of transport was the chief defect, not only as regards the removal of the wounded from the field of battle, but also with respect to the ambulances and field hospitals which ought to have been readily moveable. In an article which appears in the *Vratchebnaja Gazeta*, Nos. 10 and 11 of 1905, Dr. J. Seldowicz deplores the hardships due to the deficiencies in the transport department of the Russian army during the war with Japan. After a great and murderous battle a few privileged individuals might have the good fortune to secure conveyance in comfortable, not to say luxurious, sanitary trains, where they would be sumptuously fed and well looked after, but for the immense majority of the wounded no better means of transport was forthcoming than rough farm carts, springless and, for the most part, uncovered, and totally destitute of bedding and blankets. In these rude vehicles the sufferings of the unfortunate soldiers were terrible, for they had the pangs of hunger to endure in addition to those of cold, while in many cases their wounds and injuries remained without treatment. And yet bad as they were, these carts, being numerically inadequate, had to be reserved for the worst cases, men who could contrive to walk being obliged to make their way to the nearest railway station on foot, often having to drag themselves as best they might for distances varying between 15 and 30 kilometres. Ordinary sanitary trains frequently contained 750 patients, with at best two medical men and a nursing sister to take care of them. From one such train Dr. Seldowicz removed 50 cases and admitted them into his hospital at Yéliag. That night eight deaths took place among them but most of the rest did well. Dr. Seldowicz bases his surgical observations on 164 cases of gunshot wound. He gives it as his opinion that no projectile could be less "humanitarian" than that used by the Japanese artillery. Wounds of the head, thorax, and abdomen were in general followed by rapid death either on the field of battle or at a dressing station. They seldom or never were to be met with in stationary hospitals. Shrapnel shells, though not quite so deadly as the ordinary kind, are much more so than the rifle bullets of the infantry. Out of 16 cases of injury to the head due to rifle bullets which were treated by Dr. Seldowicz only six died. Four similar cases due to shrapnel shells all proved fatal.

The Honorary Fellowship of the Royal College of Surgeons in Ireland has been conferred upon Surgeon-General A. H. Keogh, C.B., Director General of the Army Medical Service. The same honour has been bestowed upon Dr. A. E. Wright, late Professor of Pathology in the Army Medical School at Netley.

Correspondence.

"Audi alteram partem."

THE ETHICS OF THE MEDICAL PROFESSION IN RELATION TO SYPHILIS AND GONORRHŒA.

To the Editors of THE LANCET.

SIRS,—At the end of his interesting lecture on this subject Mr. Campbell Williams asks, "Shall we knowingly and wittingly permit diseases which we could, and in my opinion should, check from exercising their baneful results without any effort on our part to restrain their dissemination." That we should if we *could* is a proposition to which there would be universal agreement, but that under the conditions obtaining in modern society there is any possible means of the social panacea type to that very desirable end I very much question. In an earlier part of his paper Mr. Campbell Williams indicates that in his opinion State regulation of prostitution is the panacea for the evil in question and sneers at opposition to it as being based on the "judgment of certain people who are totally unqualified by aught than fanaticism to express an opinion on such a momentous matter—a subject of which they have neither medical knowledge nor practical experience." Does Mr. Williams really imagine that opposition to the State regulation of prostitution proceeds only from "Exeter Hall orators, clergymen, and elderly spinsters," and "hysterical and narrow-minded champions of morality at any price"? If so, he falls into a grievous error and at the same time illustrates that professional fanaticism which is about as baneful in its effects as the Exeter Hall type of fanaticism he so contemptuously refers to. For professional men biased by their special training have a great tendency to acquire what may be termed a mental myopia which inevitably lands them in the pit of a narrow professionalism. Every judgment on a medico-sociological question such as this, based on purely medical grounds (in this case very much open to question), ought to be checked and modified by a due consideration of the psychological factors engaged and the ramifying sociological effects produced by any ill-considered attempt at legislative interference with the natural order of things.

There are at the present time two methods of dealing with prostitution as a social phenomenon, the English and the continental. In England the law dealing with the question dates from the middle of the eighteenth century and it regards prostitution solely as a public nuisance (I leave for the present the question of brothels which come under the Criminal Law Amendment Act of 1885). On the continent, however, a very different method is in force. There we find State regulation in full force, and with minor differences in different places is as follows: 1. The establishment of an organised police force to which the control of prostitutes is entrusted. 2. Registration of prostitutes. 3. Recognised brothels of two classes: (*a*) residental houses and (*b*) houses of call. 4. Weekly medical examination of the prostitutes. 5. Hospital treatment of those found diseased.

Which, now, is the preferable system—the English system of individual liberty and the restriction of the trade within the limit of a public nuisance or the continental system of strict police supervision and State control?

Take first the medical aspect of the question. The main argument put forward by the advocates of the continental system is that while the English system constitutes a great danger to the health of the community the continental system fulfils the purpose of protecting health. But is this so? I make bold to question both assumptions—the first in a

relative sense and the last absolutely. Prostitution was a flourishing institution in ancient Greece and Rome and was rampant throughout Europe in the Middle Ages and has continued in a gradually evanescent form down to the present day. But just as, while a decrease of drunkenness has been going on, temperance fanatics have ranted and raved for strenuous measures to put down intemperance, so now that the "social evil," as it is termed, is gradually diminishing and with it the incidence of venereal disease we are gravely told of the fearful perils of the streets and rigorous measures are demanded to check its progress by State interference. Next turn to the continental system and its supposed efficacy.

To the advocates of State interference I put this question: Can they explain how it is that in spite of years and years (quite half a century) of police registration and strict medical supervision of prostitutes we yet find all forms of venereal disease prevalent in continental towns? To the usual reply that the regulations are not sufficiently stringent or the medical inspection is not sufficiently frequent I rejoin that not only is this so but that the whole system of registration and supervision is a proved and convicted fraud and that this constitutes the inexcusable vice not only of this but of any possible system of State regulation. For all over the continent the police complain of the amount of clandestine prostitution which *they cannot control* and which tends always to *increase*. This disproportion between registered and clandestine prostitution has reduced the whole system to an absurdity. How, then, can this system protect the health of the population when it so signally fails to maintain those conditions by which alone the extension of the disease can be prevented? Thus taken on its own merits the continental system does not turn out to be a brilliant success but there is a still graver objection to be formulated. Even if the community could be adequately safeguarded (which it cannot) this system would still warrant the condemnation of every thoughtful man as productive of evils far more disastrous to the body politic than the evil from which it is supposed to protect the body of the individual.

As Professor Amos Sheldon says, "Our form of judicial procedure in the main embodies the principle that some overt injury must be committed before legal instrumentalities can be brought into play; and conformity to this principle was in past time gradually brought about by efforts to avoid the terrific evils that otherwise arose. The object of the whole complicated system of checks and safeguards provided by English law and secured by a long train of constitutional conflicts has been to prevent an innocent man being even momentarily treated as a criminal on the mere alleged or real suspicion of a police officer." Yet now that personal liberty, which is the right of the meanest of citizens, is to be menaced for the sake of a more than problematical gain to certain men who lead ill-regulated lives. That irresponsible power is always abused, a fact of daily experience verifying the experiences of mankind at large, is tacitly denied and it is tacitly asserted that irresponsible power given to officials over these women will not be abused. Yet on the continent certain evils are notorious as the result of State interference—e.g., blackmail, &c. Another great evil of this system is the immense multiplication of brothels with all their attendant secret vice, ten times worse for the moral health of a community than a dozen Regent streets or a score of Piccadillys.

Finally, this system encourages and fosters the growth of the most degraded class that ever disgraced the name of man, the creatures who live upon the earnings of individual prostitutes with whom they cohabit. Thus State regulation, while impotently failing to bring about the benefits claimed, very successfully produces more disastrous and more extensive evils than the evil it is designed to prevent.

I am, Sirs, yours faithfully,

Feb. 17th, 1906. DUDLEY BURNEY.

THE COLOUR OF THE HAIR IN DERMOIDS.

To the Editors of THE LANCET.

SIRS,—I have been interested in reading the letter with the above heading in THE LANCET of Feb. 10th, p. 402, and in reply to Mr. C. J. Bond's request for information as to the colour and character of the hair and epithelial appendages found in the ovarian dermoids of animals I am able to state, as one who has made a special study of the operation for the removal of the retained testes of animals and of the removal of the ovaries, that dermoids of the ovaries are practically unknown. For the past 12 years I have searched carefully on every possible occasion without success and I am unable to trace a single record of this occurrence in veterinary literature. In the testes, however, especially of the horse, dermoids are not infrequent, and they usually contain either hair, molar or incisor teeth, or bone. In one case, a photograph of which has appeared in a little work which I published in 1903,[1] I have recorded one specimen in which the hairs were of three colours—black, brown, and grey, some of them measuring seven inches in length, and in a case which I have had recently the contents consisted of a large quantity of dark-brown hairs interwoven together. Unfortunately I did not at the time note down the colour of the animal in either case. In one other instance I obtained a cyst from the leg of a sheep, this containing a mass of wool of a natural colour.

I am, Sirs, yours faithfully,

FRED. HOBDAY, F.R.C.V.S., F.R.S.E.

Silver-street, Kensington, W., Feb. 20th, 1906.

ABERRANT VACCINIA.

To the Editors of THE LANCET.

SIRS,—In connexion with this subject, upon which a note appeared in your issue of Feb. 10th, the following notes may be of interest. On Feb. 10th last a young man, aged 22 years, came as usual to the out-patient department to have his hand dressed; it had been injured in his employment in one of the carpet factories here some weeks ago. The condition of his face immediately attracted one's attention. The left side of the face and neck was very considerably swollen, while situated over the malar eminence of that side was an area of about one centimetre in diameter, circular, and surrounded by a ring of vesicles, while the neighbouring skin was inflamed. The general appearance very closely resembled a case of anthrax which had been in hospital two months previously.

In order to assist in the diagnosis I made a film from the fluid in the vesicle and stained with methylene blue; a few polymorphonuclear leucocytes were seen but no bacilli; this did not necessarily exclude anthrax, for the organism is not always found in the vesicle, though in the case referred to it was present in large numbers. The fact that the patient worked in the woollen trade and the appearance of his face inclined one to regard the case as anthrax; on further questioning him it turned out that he was a married man and that his child had been vaccinated about three weeks previously. The further development of the case has demonstrated that the condition is vaccinia.

I am, Sirs, yours faithfully,

W. A. WILSON SMITH, M.B. Edin.,
House Surgeon, Kidderminster Infirmary.

Kidderminster, Feb. 14th, 1906.

To the Editors of THE LANCET.

SIRS,—The case of aberrant vaccinia recorded by Dr. M. Eden Paul in THE LANCET of Feb. 3rd, p. 286, recalls one or two instances of the appearance of well developed vaccine vesicles in unusual situations occurring in a very extensive vaccination practice during my nearly 30 years' tenure of office as medical superintendent of St. Pancras Infirmary. Many years ago, in the days of humanised lymph and arm-to-arm inoculation, and when doubtless some crude methods of procedure were often followed and now safeguarded against by the Local Government Board Order, a young friend of mine, recently qualified, was desirous of seeing and doing some vaccination work and used to assist me occasionally. He broke off the ends of the capillary tubes, one of the little jagged ends of which he applied to his mouth to eject the contents on to the lancet. In the course of a few days a vesicle formed on the tip of his tongue; the virus insertion occurred presumably whilst he had the tube between his lips. Beyond causing some obvious difficulties in the way of speaking and taking food the vaccination pursued a normal course except that cicatrisation was delayed on account of the restlessness of the organ and the difficulty in protecting its lesion.

Another instance happened in my own person. Whilst I

[1] Castration of Cryptorchid Horses and the Ovariotomy of Troublesome Mares.

was engaged in the primary vaccination of a lunatic in the mental wards the patient suddenly made a violent movement, under his insane impulse, and caused the charged lancet to pierce the thumb of my left hand, with which I was holding the patient's left upper arm. Two small vesicles formed on the fifth day and healed in a fortnight.

In another case the unusual situation was deliberately chosen. A young woman, who held some position on the variety stage, came to the infirmary for her confinement. She had never been vaccinated and was anxious to be protected before she was discharged. She would on no account allow of vaccination on her arm, because she thought that the "marks" would spoil the shape of the arm, which was often exposed in her engagements. She selected the outside of her left thigh and the result was quite successful.

In my young friend's case he never had been revaccinated and he met his fate with resignation. In my own case I had been successfully revaccinated for the second time six years before the above recorded event.

I am, Sirs, yours faithfully,

WALTER M. DUNLOP, M.B. Glasg.,
late Medical Superintendent, St. Pancras Infirmary.

Ludgate-hill, E.C., Feb. 12th, 1906.

ON PHYSICAL TRAINING IN SCHOOLS.

To the Editors of THE LANCET.

SIRS,—Dr. W. P. Herringham in THE LANCET of Feb. 17th, p. 468, prefaced his remarks well by saying that the members of the association he was addressing did not so much wish to hear about the military needs of the country as about the physical education of boys and girls. Nevertheless, he urged that it is the duty of every boy to learn such drill as will prepare him for the universal military training he and the National Service League wish to inflict on this country. Surely, Sirs, this advocacy of military notions and of the idea that the basis of our national greatness is destructive power is opposed to the true vocation of our profession, which is to save life, not to destroy it. In all the branch developments of our work is not the aim to raise the lower and inefficient types of humanity by sympathy and education rather than to crush them by violence? As to the civilised nations, you, Sirs, recently made a protest against the *Daily Mail* for publishing an unwarranted suggestion that there was jealousy between surgeons of this and another country. When we consider how that no one nation can boast to be the sole repository of all the intellect or virtue and that the interest of science lies in coöperation and mutual aid instead of antagonism we must deplore the advocacy of militarism by medical men. I am, Sirs, yours faithfully,

E. CLAUDE TAYLOR.

Roslyn-hill, Hampstead, N.W., Feb. 19th, 1906.

A NOTEWORTHY SEQUEL OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—The notes of a very mild case of influenza and its results told by a surgeon may perhaps be of interest, not on account of the rarity of the symptoms, but because they emphasise the necessity for care even in the mildest case. I am 47 years of age and the week before Christmas had what I took to be an ordinary coryza, with sneezing and running at the nose and eyes, such as I have several times a year. Instead of the symptoms having disappeared at the end of three days, as is usual with me, I began to cough. One evening (Dec. 22nd) my temperature was 100·4° F. I felt very much as I had done on the only occasion on which I had had influenza, some six or eight years ago. That attack was also very mild, the temperature being only once over 100°. The symptoms then were general aching and a feeling of weakness which did not entirely disappear for between three and four months.

For a few days after Christmas the cough was severe and, being more inclined to order than to take medicine, I waited for some days before taking some elixir terperoin, which quickly gave relief. Finding that I could not run up a couple of flights of stairs without setting the heart going at 140 or so to the minute and feeling altogether very "cheap" I began to take virogen on Dec. 28th. Within a week all the effects of the influenza had apparently disappeared, the pulse did not run on exertion, and feeling "all right" I naturally stopped taking the medicine and the food. On Feb. 10th I had occasion to be examined for life insurance and was rather surprised to be asked if I knew I had a murmur at the apex. The conclusion the examiner came to was that there was no dilatation but that there was mitral incompetence. This examination was sufficient for the purpose in view, but as there was no history which could possibly account for this—my heart was absolutely normal about three years ago—I consulted Dr. S. Russell Wells the next day. His examination explained to my mind the case exactly; he found the apex beat in the normal position with a not very well defined mitral murmur, but on listening over the tricuspid area a fairly loud bruit was to be heard, and it was evidently this transmitted sound which had been taken for a mitral murmur. On percussing out the heart in the usual manner he found that while on the left it was normal on the right it was fully one inch out. By auscultatory percussion this was confirmed. This method was new to me. The cause of the condition was thus evident; the influenza had weakened the heart muscle and the coughing had stretched it. Probably, had the cough mixture been taken when the cough began there would not have been any heart trouble. The moral which one may draw is that it is not always advisable to get strong too quickly after influenza, and that nature while bringing this ill upon us provides a means of safety in the accompanying debility.

I am, Sirs, yours faithfully,

Feb. 16th, 1906. SURGEON.

THE SALARIES OF POOR-LAW MEDICAL OFFICERS.

To the Editors of THE LANCET.

SIRS,—Many Poor-law medical officers with myself will be grateful to THE LANCET for its temperate yet powerful advocacy for a reconsideration of the salaries and fees now allowed us by the Local Government Board. On one point I fear that I was not sufficiently clear in my letter in your issue of Feb. 3rd, p. 347. It was very far from my intention to suggest that revising barristers are overpaid or that their salaries should be reduced. My object was to emphasise the point that the probability of other people being willing to accept an appointment at a lower, or even at the same, rate was no argument that the salary was fixed at too high a standard. To illustrate my contention, I said that *if* the position of a revising barrister was advertised for competition at half the salary now paid the number of candidates would excite some comment. So, too, the fact that there are always more than sufficient candidates for any Poor-law medical appointment should not be taken in any way as an argument that the posts are adequately remunerated. The salaries of appointments should be fixed in accordance with the work and responsibilities intrusted to the members of a learned profession; they would then be valued for themselves and not, as is too often the case now, for the indirect advantages that may accrue to the holders of them. Perhaps the Royal Commission will afford us the opportunity of stating our case?

I am, Sirs, yours faithfully,

Feb. 13th, 1906. M.O.

NURSING MOTHERS.

To the Editors of THE LANCET.

SIRS,—In connexion with the "Baby Show" that was held at the Fulham town-hall on Feb. 13th I find on inquiring of the mothers of the prize babies since that 41 are being nursed, five are being fed on cow's milk and barley-water (prepared according to the directions that were given to the mothers whilst we were attending them), one was fed on Nestlé's milk, and one on Davis's malted food mixed with cow's milk. Neither of the judges asked about the feeding, so that an unbiased opinion might be formed, so I think that it is a matter of congratulation that so many "nursing" mothers gained the prizes and that cow's milk and barley-water stood next. I shall be very pleased if you will publish this statement as it is of such public interest.

I am, Sirs, yours faithfully,

E. HEATLEY,
Matron, St. Clement's Maternity Home and Nursing Institution.

Fulham, S.W., Feb. 17th, 1906.

P.S.—Some of the nursing mothers have to go out to work but they make arrangements that they may still nurse their infants.

THE USE OF DISINFECTANTS FROM THE ETHICAL POINT OF VIEW.[1]

To the Editors of THE LANCET.

SIRS,—During the past two years considerable interest has been taken by various scientific workers in the standardisation of disinfectants, and an encouraging feature of this interest is found in the fact that instead of mere academic discussion, which so frequently forms the *originem et finem* of such matters, it has been productive of much excellent laboratory research, both in this country and abroad; and further—and most important of all—the findings have been officially accepted as a means of selecting disinfectants by a number of public bodies, of which the War Office, the Admiralty, the Metropolitan Asylums Board, and the Corporation of London stand out as worthy pioneers in this movement.

Klein, Firth, Sommerville, and others working with the Rideal-Walker method have arrived at similar and important results. A number of conditions which govern the complex process of the disinfection of different bacteria has been investigated and the results bid fair to lead to a profitable issue. But plain as are these conclusions, and plain as seems the line of action which they indicate to municipal and other public bodies in the matter of disinfection, the great bulk of the English sanitary world remains to-day uninfluenced, if not actually indifferent. It would appear that an innovation in any department of private, municipal, or national life—no matter how important the particular innovation may be—*is* anathema to the Englishman. No such insane spirit is to be found in Germany or America; and in this connexion I am forced to ask when will this old country awake to learn that only in the application of modern scientific discovery exists the one weapon with which she may attempt to fight her way amongst the nations of the world?

Ten years ago it was impossible, even for a man of science, to distinguish between an efficient and an inefficient disinfectant; now the distinction is made with certainty and comparative ease. It is necessary here to bear in mind that the chemical purity of a substance may have no relation to its value as a disinfectant. This value depends upon the sum of a number of chemical and physical conditions connected both with the disinfectant and the material to be disinfected. As a large number of modern disinfectants is taken from the aromatic series in which, even if it were serviceable, it is impossible to formulate a specification, it is absolutely necessary that a valid guarantee of efficiency should accompany each. This guarantee of efficiency must be an expression of the germicidal powers of the substance. Since no satisfactory method of testing such values existed until recently, local authorities left the selection of disinfectants to be settled almost entirely by price, without regard to efficiency; the cheaper the article the more extensively it was used. In a certain district where offensive odours largely abound an aromatic disinfectant of extremely low germicidal value is at present being used, according to the statement of the officer in charge, "because of its fragrance." He frankly confesses that he cares nothing as to whether it possesses germicidal properties or not. Offer the average sanitary committee a disinfectant of guaranteed efficiency but at a higher price than that of a worthless article, and you will be told, "We care not what the efficiency may be so long as the article is low in price; *we want something at a shilling per gallon.*" So much for the policy pursued by these guardians of the public health. Do these individuals know that a worthless article is dear at any price, or is it that they are utterly regardless of the public weal? Ordinary intelligence would point to the latter conclusion and this is confirmed by such statements as the following: "It is no matter what kind of disinfectant is ordered so long as it is cheap. *Disinfectants are only used for the moral effect they produce on the people.*"

It is high time that all such charlatanism in public health administration should be stamped out. It is the bounden duty of every medical officer of health to inform his committee of the germicidal efficiency of all disinfectants which he sanctions for use in his district and, further, to ascertain, so far as the present state of our knowledge will assist him, what form of disinfectant is most efficient in a particular case; for until this work of disinfection is carried out in an earnest and thorough manner we cannot hope to succeed in the battle against infection. There exists no longer any excuse for ignorance on the vital question of efficiency in disinfectants, nor for the puerile, and, it may be added, criminal practice of making the sole basis of selection a matter of pence. The tide of infection, although reduced in this country in recent years, has not been stemmed to that degree which our knowledge of the conditions warrants. The activities of the public health authorities require radical rousing on this subject, and we need the strenuous and persistent work of a number of enlightened and intelligent men of the type of Magoon who, on behalf of the American Government, has recently attacked the monstrous task of exterminating yellow fever from Panama. The public health service of Britain demands the best brains and moral stamina that the medical profession of this country can supply. It is to be feared that there is considerable evidence to show that in some districts at least we are still a long way from such a consummation.

Let every medical officer of health in the country see to it that efficient, and none but efficient, disinfectants are used in his district; that this efficiency is scientifically guaranteed; and that something more than a mere moral effect is required as the result of their application.

I am, Sirs, yours faithfully,
J. T. AINSLIE WALKER, F.C.S.

Cannon-street, E.C., Feb. 19th, 1906.

[1] See leading article in THE LANCET of Feb. 10th, p. 385.

THE TURVEY TREATMENT COMPANY (1905), LTD.

To the Editors of THE LANCET.

SIRS,—I have been instructed by the Turvey Treatment Company (1905) Limited of Amberley House Norfolk-street, W.C. with reference to your article in THE LANCET of February 10th at page 395 in which you refer to my clients treatment in a manner calculated to do them considerable injury.

In the first place my clients have nothing whatever to do with the Leon Syndicate and no director of the Turvey Treatment Company Ltd. has any interest in or connection with that Syndicate in any shape or form.

Dr. Pooley is not in any sense a Shareholder in or member of my clients Company and has no connection with them in any way except that he is Chairman or Managing Director of a Company called the Turvey British and Foreign Institutes Limited (whose registered office is at Woodford Green, Essex) which Company holds a License obtained from my clients to use the methods for cure of inebriety as used by the Turvey Treatment Company Limited.

Mr. J. Stuart Robertson for some time past has ceased to be a Director of the Turvey British and Foreign Institutes Limited.

My clients cannot understand how Dr. Pooley could assure the Ethical Committee of the Association that he was no longer connected with the Turvey Treatment as in an Affidavit by Dr. Pooley sworn the 5th February instant he describes himself as of Edenhall Woodford Green Managing Director of the Turvey British & Foreign Institutes Ltd.

With reference to your describing the methods of my clients as a quack treatment and to the whole tone of your article and the manner in which you attack my clients I must ask you to withdraw this and insert such apology for your highly inaccurate and libellous statements as my clients made deem adequate.

Numerous original testimonials from persons of all ranks (including members of the medical profession) who have been cured of the terrible curse of inebriety can be produced to you if you will give an undertaking to respect the anonimity of the writers thereof and at the same time my clients challenge you to point out any one case where anyone has been treated by their methods which has not been successful.

Yours truly,
MAURICE MOSELY.

50, Threadneedle-street, London, E.C., 20th February, 1906.

*** The Turvey Treatment is a secret treatment, and its proprietors must expect to have this fact commented upon. They have only to publish the complete formula of their treatment to obtain for it proper scientific trial, and, if the

trial proves satisfactory, proper scientific support. Until this is done the treatment must fall under the category of quackery. As long as the treatment remains a secret the public must be protected from its possibly mischievous effects, or from possibly paying an excessive price for what may turn out to be the ordinary procedure among medical men when dealing with cases of inebriety. The fact that certain cases of inebriety have improved under the treatment is beside the point. Our references to the Turvey treatment convey these sentiments—no more and no less, and we do not see where we have failed to do justice to Mr. Mosely's clients. Nor can we find evidence of our high inaccuracy. The connexion between the Turvey Treatment Company and the Leon Syndicate is that the gentleman, stated by Mr. Mosely to be "Chairman or Managing Director of a Company called the Turvey British and Foreign Institutes, Limited," is a director of the Leon Syndicate, Limited. We have neither said nor suggested that there is any other or closer connexion. Mr. J. Stuart Robertson's name appears as a director of the Turvey British and Foreign Institutes, Limited, on the prospectus dated May 1st, 1905. We accept Mr. Mosely's statement that Mr. Robertson is a director no longer. From a letter dated Jan. 30th, 1906, we learn that he is now secretary of the Turvey Treatment Co., Limited, and this we have said in our article.—ED. L.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Queen's Hospital Extension Scheme.

IT has been known for several years that the accommodation at the Queen's Hospital was inadequate not only for clinical but also for administrative and nursing purposes and as a result the work has been carried on at high pressure. This has been especially the case in the in-patient department, in which the beds are almost invariably all occupied and urgent cases have to wait for admission. The nurses' home is not large enough to accommodate all the nursing staff, so one-third of the nurses have to sleep out, and there is no residential accommodation for the superintendent of the hospital. Schemes to remedy this very undesirable state of affairs have been carefully considered and the desire to meet the demand for increased accommodation gave rise to the suggestion that a block of new buildings should be erected on ground which is at present devoted to a lawn and a tennis court. It was seen, however, that the adoption of such a plan would cause very great crowding together of buildings and that it could only be resorted to if no other course were possible. Luckily it came to the knowledge of the authorities that a number of houses in Bath-row, adjoining the hospital and having long gardens extending to the Worcester canal, might be obtained for extension purposes at a not unreasonable price. Taking advantage of the opportunity, and utilising for the purpose part of the money which accrued to the hospital by the Best bequest, the managing committee secured an area of land which will enable it to erect a series of buildings as large as the original hospital, and this without in any way encroaching upon the surrounding air space. Plans have been prepared for a three-storey building which will provide room for 60 beds. On the first floor there will be space for a male ward 120 feet by 24 feet, three bath-rooms, a clinical room, two small wards, a ward kitchen, and a store. It is probable that the ward itself will be divided into two parts. The second floor is to be devoted to a children's ward of six beds and a ward for women with 24 beds. It is proposed that the new wards shall be entirely medical and that the older part of the hospital shall be devoted to surgical cases. In this way the pressure on the clinical work will be removed. The ground floor is to be utilised for a physicians' room, residential quarters for the superintendent, a students' day room, a cloak room for lady students, and a new chapel of larger size than the relatively small room which has hitherto been used as a chapel. In addition to the main scheme the nurses' home is to be enlarged to make the sleeping accommodation sufficient for the whole nursing staff and to provide a nurses' recreation room. Additional dressing rooms, which are badly needed, are to be provided in association with the out-patient consulting rooms by the erection of lean-to structures at the sides of the out-patient hall. The scheme is a large one and a large sum of money is necessary for its proper accomplishment and the committee appeals for a building extension fund of £30,000. The appeal has been well launched, for £14,500 have already been privately promised. This sum includes £2000 from Alderman Clayton (the treasurer of the extension committee), £1000 each from Mr. George Cadbury, Mr. T. Grosvenor Lee, and Messrs. Mitchells and Butlers, and £500 each from Mr. A. W. Albright, Mr. Cregoe Colmore, Mr. E. C. Muntz, and Mr. George Tangye. There should be no difficulty in obtaining the remainder of the money, for the scheme is well thought out and well balanced, and when it is carried out the efficiency of the hospital will be greatly increased to the manifest advantage of the poorer classes of the city who are dependent upon the hospitals for medical and surgical treatment which cannot be provided in their own homes. Moreover, it is 20 years since the hospital has made any special appeal for funds and during that time it has established a record which entitles it to hearty and liberal support. In past years the working men of the town took an active part in obtaining funds for the hospital which has done so much good work for them, and now they have again an opportunity of showing in a practical manner their gratitude and their appreciation of an institution which has so often stood between them and death.

Other Local Charities.

The annual report of the Evesham Cottage Hospital shows that 86 patients were treated during the year, of whom 48 were cured, 20 were relieved, five died, and five remained under treatment. The funds received during the year were from subscriptions and donations, £130; from patients £69; Hospital Saturday collection, £48; and collections at places of worship, £69. At the annual meeting the committee expressed its high appreciation of the great interest which the Princess Louise d'Orleans and the other members of the household at Wood Norton took in the affairs of the hospital.—It is interesting to find from the report of the Warwick Cottage Hospital that there had been an increase of the provident members during the year and that a third of the total population of the borough are connected with the dispensary as subscribing members. A suggestion has been made that the hospital should be enlarged and made adequate for simple operations and surgical nursing, but to this there is some objection on the ground that if more funds were used for that purpose the Warneford Hospital would receive even less adequate support from Warwick than it does at present.

Increase of Lunacy.

At a recent meeting of the King's Norton guardians this subject came into prominence in association with the return received from the inspector of No. 3 district. In this return it was shown that during the decade 1891 to 1901 the population had increased 46·9 per cent. In 1895 the number of lunatics in asylums was 216 and in 1905 the number had increased to 925. This merely shows that the percentage of lunatics is increasing in this as in other districts, but the discussion that followed the reading of the report is worthy of note, for it showed that the members of public bodies are beginning to take the matter to heart and to search for feasible methods of dealing with the circumstances. In the first instance, however, there is some confusion as to cause and what may be looked upon as prejudiced suggestions were made with regard to vaccination and drink, but in despite of this there was a gleam of intelligence in the statement made by the Rev. G. Astbury that steps had been taken in association with Birmingham and Aston to attempt to obtain powers to detain epileptics and feeble-minded persons, from which classes of subjects many lunatics are derived. If this line of action is followed up and if still further powers than those mentioned are sought there is but little doubt that the number of lunatics might not only be prevented from increasing but it might be very considerably decreased and in a generation or two be easily held within bounds. It is useless to try to minimise the seriousness of the position, as the chairman of the board did, by suggesting that the increase is more apparent than real because more patients in incipient stages of lunacy are sent to asylums

than formerly. Lunacy is undoubtedly increasing and it is time the medical profession as a whole began to educate the public with regard to the causes of the increase and the only possible methods of meeting it. The methods of diminishing and if possible eradicating lunacy will have to be firm, and some people will call them cruel, but they must be adopted unless the population is prepared to sustain a rapidly increasing burden. The sooner, therefore, that public education on the matter is commenced the sooner we may hope for useful results.

Poverty in Birmingham.

A most interesting address upon this subject was delivered by Mr. Frank Tillyard at a meeting of the National British Women's Temperance Association. Mr. Tillyard was secretary of the Lord Mayor's Relief Fund and, making use of the statistics collected in association with that fund, he arrived at some interesting conclusions. He pointed out that in 1886 the percentage of population relieved was 3·7 and in 1905 it was 6·5. Clearly there has been a large increase and the cause of this was not made obvious, but Mr. Tillyard characterised as mere loose talk the statement that one-third of our working population was on the verge of starvation. He asserted that two-thirds of that one-third had no reason to starve and that if their children were underfed and their homes were impoverished it was not from economic causes but it was largely due to moral conditions and environment. In Mr. Tillyard's opinion the evidence gathered did not favour the assumption that rent and the size of families overwhelmed the slum inhabitants but there was strong reason to believe that the wages were badly spent and improvement could only be expected in better conditions and as an outcome of better teaching.

Dinner to Dr. W. Wright.

The farewell dinner to Dr. Wright was a great success; every seat was occupied, and in a most cordial, appreciative, and happy manner Mr. H. G. Barling (the Dean of the Medical School) spoke of Dr. Wright's services to the University and wished him success in London. Dr. Wright made a suitable response, expressing his regret at the termination of his association with the school, and at the close of his speech he proposed the toast of the school. In responding to this toast Dr. O. J. Kauffmann took the opportunity of pointing out to the large number of students present how important it was for the continued success of the school that it should possess the hearty and active coöperation of all its members, both students and staff, and how essentially the success of the school was bound up with their own success in life.

The Warley Woods Scheme.

The scheme for the purchase of Warley Woods and the grounds surrounding Warley Abbey as a place of public recreation for the inhabitants of Birmingham and district has been carried to a successful issue. Towards the purchase money no less than £43,500 have been raised by voluntary subscription, the remaining £28,500 the Birmingham corporation were asked to provide and this it has agreed to do. The Warley Woods have been long recognised as one of the few remaining beauty spots in the neighbourhood of the city and it will now form, with the single exception of Sutton Coldfield, the finest public park in the Midlands. By the purchase, the acreage of the public parks in Birmingham is increased from 436 to 546 acres; the city is, however, still behind other large centres of population in this respect for in Liverpool the acreage is 830, in Manchester 1146, in Leeds 2346, and in Bristol 715 acres.

The Report of the City Analyst.

From the report of the city analyst for the last quarter of 1905 I gather that of samples submitted under the Food and Drugs Act the proportion adulterated with preservatives only was unusually low, being only 0 9 per cent.; but 9 5 per cent. of the samples were adulterated in other ways. In the fourth quarter of 1899 12·2 per cent. of the samples were thus adulterated and the amount of adulteration fell to 4·4 in the corresponding quarter of 1904. Last quarter, therefore, was an unsatisfactory one. Of the 151 samples of milk examined last quarter eight had been adulterated by the addition of water or the abstraction of fat, a slight increase compared with the previous year. It is noteworthy that all the samples of milk were free from preservatives, a great improvement on past years. The number of samples taken from railway stations was 43, from milk-carts 49, and from retail shops 59, and the percentage of adulteration was 4·7, 12·3, and 1·7 respectively. The samples from milk-carts were thus much worse than those otherwise obtained. Seven of the 64 samples of butter received were adulterated with foreign fat. This is equivalent to 11 per cent. of adulteration and is an unusually high proportion. In the corresponding quarters of 1904, 1903, and 1902 7 per cent., 3 per cent., and 9 cent. respectively of the samples of butter were adulterated with foreign fat. Of the samples of whisky examined three samples of Irish whisky were slightly below the legal limit and two more were adulterated with water. Out of 20 samples of beer examined one was found to contain an excess of chlorides. 53 samples from the health department included eight kettles which were examined to ascertain if water boiled in them became objectionable for potable purposes. Galvanised iron kettles were found to yield a dangerous amount of zinc to water. The tin lining of four kettles contained an appreciable amount of lead but the kettle lined with enamel was pronounced satisfactory.

Inspection of Food in Birmingham.

The inspection of food in Birmingham has been performed by three officials but the duties have become so onerous that a fourth has recently been added. These inspectors paid no less than 11,000 visits to the public slaughter-house at Smithfield last year. The quantity of food condemned during the 12 months amounted to 300 tons. Of this 85 tons consisted of fish, game, and poultry, and 18 tons of fruit and vegetables. 2000 quarters of beef, 580 calves, 622 sheep and lambs, and 750 pigs were condemned. A large number of boxes of kidneys and tripe, which came from abroad, failed to pass the inspectors. The list of condemned goods also included 450 boxes and barrels of wet fish, 300 packages of dry fish, 300 barrels of shell-fish, 5000 rabbits, 1000 ducks, 600 fowls, 1100 turkeys, 150 geese, and 350 head of game. Large quantities of eggs were also condemned. It is stated that of the meat which passes through Smithfield two-thirds is either killed at the port of debarkation or comes over to this country in the form of chilled or frozen meat. The last named is said to be inspected abroad and, generally speaking, it is found to be of very good quality, the best of the meat being always set apart for exportation. In the majority of cases where it is discovered to be unfit for food its condition is attributable to its being delayed in transit or to exposure after its arrival in Birmingham.

Feb. 20th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Consumption in Rochdale.

THE report of the medical officer of health of Rochdale was considered on Feb. 2nd. It was asked in the council whether the voluntary notification of pulmonary tuberculosis did not tend "to check or cure the disease" and if something could not be done "to avert the appalling loss of child life." As regards the latter it was claimed that, though infant mortality was much too high, Rochdale "stood the best in comparison with 11 other Lancashire towns similarly circumstanced." This blot on the manufacturing districts generally will not be removed till the mothers stop at home and suckle their children, instead of feeding them, if not on a diet of red herrings and something else about as bad, according to Sir John Gorst, on food just as unsuitable for the early months of life. Before this condition of things can be arrived at there must be an improvement in the social habits of the men as well as of the women, more intelligence, less beer, and more thrift. But the prevalence of pulmonary tuberculosis, although less than obtained 25 years ago, still very properly engages the serious attention of the municipal council. It is said that there are regularly 200 hopeless cases of consumption in the borough and this means of course numbers in earlier stages of the disease. It seems that there was at one time an Anti-Consumption League but one of the aldermen made a somewhat serious charge against the medical profession in Rochdale, saying that the league "had been strangled in its birth because the medical men among them could not agree as to what was the best and right course to take in the treatment" of the cases. The Holden trustees, he said, had given £10,000 to the Delamere Hospital and had secured to Rochdale at least three beds, but they still wanted larger voluntary efforts. One great object should be to improve

the dwellings of the people and to educate them in habits of cleanliness, especially as to the disposal and destruction of sputa and the necessity for obtaining as much light and ventilation as possible. But, of course, when the women work in the mills they cannot do the housework as it should be done.

Dealing with Unwholesome Food.

The markets committee of the Manchester corporation has asked for powers to prosecute the senders of diseased meat, the corporation having at present only the power of seizing and destroying such meat. The chairman explained that the provision would not apply to the fruit and vegetable market nor to the fish market. It would perhaps be more correct to say that the request for this power is embodied in an omnibus Bill of multifarious clauses which has to stand the test of a town's meeting before being submitted to Parliament. As most of the clauses of the Bill were negatived by the votes of the ratepayers at the meeting since held there will be some delay in obtaining the powers desired.

Resignation of Dr. A. M. N. Pringle.

At the meeting of the Manchester port sanitary authority held on Feb. 5th the resignation of Dr. Pringle, the medical officer of health of the port, was received "with much regret." The vacancy will be advertised and the commencing salary is £350. Dr. Pringle has done good work here and has kept unceasing watch against the introduction of plague or any other infectious disease. He has been appointed medical officer of health at Ipswich.

Feb. 19th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Southern Hospital: Large Deficit: Suggested Corporation Subsidy.

THE adverse balance on Dec. 31st last amounted to £7527, as against £6387 on the same date of the previous year. The total number of attendances was about 60,000 and the greatest number of in-patients at one time was 208. 144 patients suffering from various forms of tropical diseases were treated in the special wards during 1905. There were only two deaths which, considering the extreme severity of many of the cases, must be regarded as satisfactory. The students attending this department of the hospital's work—all of them fully qualified medical men or medical missionaries—continued to manifest the greatest interest in it. Nurses from the Colonial Office for service abroad were also among those trained in the tropical ward. The President, in seconding the adoption of the report, said that the pressure upon the hospital was so great at present owing to the rebuilding of the children's infirmary that further wards must be found, and either the corporation must subsidise the existing institution or the workhouse hospital would have to receive the surplus cases. They had secured the land for the provision of an out-patient department in the immediate neighbourhood of the hospital and it was to be hoped that the corporation would give them a grant, as it had done to other similar institutions, and so obviate the necessity of having to provide for another such building elsewhere, more especially as during the year 1905 they had, as in past years, a number of corporation patients in their wards.

Liverpool Country Hospital for Children.

In 1899 this hospital was opened with 20 beds in the convalescent home at West Kirby. Since that time the committee has been unceasing in its endeavours to raise sufficient funds for the erection of a suitable hospital in the country at Heswall. In June last, the plans being finished, a tender was accepted for building the central block. The cost of this will be £25,087, without furnishing; while the amount standing to the credit of the hospital erection account is only £23,962, leaving a deficiency of £1125. The contractor has undertaken to complete the central block by April 30th, 1907. Mr. Andrew Gibson has generously offered to pay for the erection of the administrative block at a cost of about £7000. Mr. Holbrook Gaskell has promised a donation of £1000 towards the building of a surgical operating theatre and Mr. William Jones has also promised £1000 to endow a cot. This makes the third endowed cot and there is a promise of two others to be given next year. £2900 had been spent on the site and in all £37,000 had been raised. So far the committee had no funds for building the wings and it is to be hoped that for the sake of economy the money will soon be forthcoming. The hospital, which is for the treatment of chronic diseases of children, will be open to cases selected from the whole of the kingdom and for this reason the committee appeals for further endowments of cots. Wigan, Chester, Warrington, and North Wales are specially appealed to by the chairman of the committee.

Maintenance of Lunatics: Proposed Reduction in Lancashire.

The Lancashire asylums board proposes to reduce the rate of maintenance for lunatics from 8*s.* 9*d.* to 8*s.* 2*d.* per week. This is the third reduction of 7*d.* per week in three successive years. It means a saving of £15,000 to the Poor-law unions in Lancashire during the present year. The Liverpool parochial ratepayers will be relieved to the extent of some £3200. The cost to the asylums board is at present about 9*s.* per week, but the Liverpool representatives upon that body have demanded that the funds, amounting to £60,000, which have accumulated during the past few years should be returned to the guardians and, after much pressure, their demand has been acceded to. The total number of lunatics chargeable to the county is: Lancaster Asylum, 2044; Prestwich, 2669; Rainhill, 1934; Winwick, 1985; and Whittingham, 2087. Liverpool is responsible for 2300 out of the total number.

Proposed Sanatorium for Consumptives in Cheshire.

The Cheshire county council has under consideration a scheme for the provision of a sanatorium for consumptives in the county of Cheshire. The medical officer of health of the county (Mr. F. Vacher) has issued an interesting report on the subject of open-air treatment. Mr. Vacher has made exhaustive investigations into the results which have attended the open-air treatment of consumptives and has arrived at the conclusion that it has the almost universal support of the medical profession and that it offers the best prospect of curing the patient, apart altogether from its value in preventing the spread of the disease. There are three sanatoriums in Cheshire and another is being erected, but these will not be available for Cheshire patients, and the county council is considering the advisability of erecting a sanatorium for Cheshire cases at a cost of about £5000. Mr. Vacher does not consider a sanatorium for consumptives to be a danger to the surrounding neighbourhood.

Vaccination Returns for Toxteth.

At the weekly meeting of the Toxteth board of guardians held on Feb. 8th the clerk reported that the vaccination returns for the year 1904 were as follows:—Number of births, 4262; successful vaccinations, 3247; insusceptible vaccinations, 22; conscientious objections, 3; died unvaccinated, 532; postponed by medical certificate, 47; removals to other districts, 408; unaccounted for, 3. The figures for the half year ending June 30th, 1905, were:—Number of births, 2126; successful vaccinations, 1663; insusceptible vaccinations, 6; conscientious objections, 3; died unvaccinated, 181; postponed by medical certificate, 84; removals to other districts, 188; unaccounted for, 1.

Bonus for Healthy Children: Sir John Brunner's Philanthropy.

Sir John Brunner, Bart., M.P., has arranged an interesting experiment for the township of Winnington, Northwich. A nurse is to visit the homes to assist and to instruct mothers in the care of young children. Every case will be reported upon and at the end of 12 months in all instances where a satisfactory report has been received Sir John Brunner has undertaken to make a grant of 20*s.* to each mother or guardian. The idea is that such a scheme will combat infantile mortality and may serve as a basis for other districts.

Feb. 20th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

Leeds Public Dispensary.

THE appeal which is being made by the board of the Leeds Public Dispensary for a capital sum of £25,000 to wipe off the debt on the new buildings and to insure, together with an increase in the regular annual subscriptions, an adequate income to carry on the extended work of the institution is

one which is expected to meet with a ready and cordial response from Leeds and district. In the appeal which is before me it is pointed out that the total cost of the site, new buildings, and furnishing amounted to £33,000 and that as £25,000 were received from the corporation for the old buildings there remains a sum of £8000 to be provided on the capital account. As the new buildings are large and in every way more efficient and capable of dealing with a greater number of patients the annual expenditure must in the future be greatly increased. During the last year there has been an increase of 40 per cent. in the number of patients treated. The total number treated last year was 36,255 and 15,000 visits were made by members of the resident staff at the houses of patients. The institution of the dental department, the absorption of the Southern Dispensary as the new southern branch, the necessity which arises from this amalgamation for new buildings on the south side of the river, and the steady increase in the amount of work done warrant the board in making the present appeal, which, it is pointed out, is the first that has been made to the public generally for a period of 38 years.—At the last meeting of the board of the dispensary Miss May Thomson was, on the recommendation of the Faculty, appointed an honorary clinical assistant to Dr. W. McGregor Young who is in charge of surgical patients at the southern branch.

The General Infirmary.

When the new buildings, erected some 12 months ago as an extension of the General Infirmary, were completed it was believed that adequate provision had been made for an efficient post-mortem department. This included a laboratory for microscopical and chemical work and until quite recently an arrangement has existed whereby the junior demonstrator of pathology at the medical school has divided his time between the service of the University and the infirmary. The increase of the work, and more especially the strong feeling of the members of the honorary staff of the infirmary generally that the work which should be done in the laboratory demanded the undivided attention of one man, led to representations to that effect being made to the board, which appointed a joint committee to consider the matter. As a result of this it was decided to appoint a clinical pathologist, at a salary of £200, who will devote all his time to the service of the infirmary. His duties will include the reporting on specimens sent from the wards, operating theatres, and post-mortem room, and he may be called on to assist members of the staff in any special clinical investigation. To this position the infirmary is fortunate in having been able to appoint Mr. Oskar C. Gruner, M.B. Lond., who, formerly junior demonstrator of pathology at the University, is familiar with the work and will be able to develop it on the lines desired by the staff. The present laboratory accommodation is to be improved by the addition of a new building which will lighten the pressure on the present laboratory and in this way it is felt that the requirements of the infirmary will be met for some years.—Mr. Alan Boyle, M.B., B.Ch. Vict., has been appointed resident medical officer to the infirmary in succession to Dr. P. K. Steele. Dr. Boyle, who took his degrees with honours, has already filled several of the junior posts at the infirmary.

Report of the Medical Officer of the Halifax Education Committee.

The annual report of Dr. T. H. Hunt, the medical officer of the Halifax education committee, for the past year presents many points of interest. All the children above the first two standards are examined with reference to vision and those only who are brought to the notice of the medical officer for defects of hearing are examined as to the condition of their ears. Dr. Hunt has passed in review some 7000 children and has recommended for treatment 326 in respect of deficient eyesight. 14 were found to be suffering from aural discharges and 27 from deafness due to growths in the throat and nose. Strabismus was found in 74 instances but Dr. Hunt remarks that the discouragement by the Board of Education of sewing before the age of six years will probably result in this becoming less frequent. Among the less common ailments observed were lupus, ulcers of the cornea, and bow legs. Irregularity of the teeth causing deformity of the mouth of a kind that led Dr. Hunt to recommend dental treatment was present in 68 children but dental caries was almost universal. An examination was made at the education committee's office of 168 children as to their fitness to attend school; of these 52 were found fit for regular attendance; 41 being delicate were deemed fit for occasional attendance only; four were unfit for attendance on account of being epileptic, and the same number on account of heart disease; four were blind and one was deaf and these were sent to the special schools for such children; and the remaining 62 were unfit through being affected by ringworm or other infectious diseases of the scalp.

Feb. 20th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Health of Barry.

CONSIDERABLE interest is attached to the annual report of Mr. George Neale, the medical officer of health of Barry, because his records are concerned with a town which was non-existent only 30 years ago and in which the Public Health Acts have been administered with commendable zeal and foresight. The birth-rate during 1905 was 31·4 per 1000, compared with 37·3 in the previous ten years, and the death-rate was 12·7, compared with 14·3 during the ten-year period. The actual death-rate must, however, be rather higher than that which Mr. Neale has recorded, for he does not appear to have taken into account Barry residents who died during the year in public institutions outside the town, such as the county asylum or the Cardiff workhouse or hospital. The comparatively high rate of infantile mortality—115 per 1000 births in 1905 and 146 per 1000 in the previous ten years—supports the contention of those who maintain that improper feeding is much more responsible for infants' deaths than are insanitary surroundings, for there are in Barry few if any crowded courts, dilapidated houses, or filthy privy middens such as exist in older towns. There are no private slaughter-houses in Barry and among the 12,294 animals slaughtered in the public abattoir during 1905 not one was found to be diseased or unfit for human consumption.

Notification of Measles.

The medical officer of health of Pontypool rural district has reported to the district council that the compulsory notification of measles has been of very little assistance in checking the spread of the disease.

Monmouth Hospital.

The annual meeting of the subscribers of this institution was held on Feb. 10th under the presidency of Lord Llangattock. The medical report stated that during the past year 79 in-patients had been admitted and 991 out-patients had been treated. It was decided to add a small children's ward to the institution.

The Prevention of Consumption.

The Berkshire county council has decided to advise the district councils within the county to arrange for the voluntary notification by medical practitioners of cases of consumption. The councils are also urged to arrange for the disinfection of the houses occupied by, and the clothing used by, consumptive patients.

Shropshire Dairy Farms.

A question of some importance connected with the milk-supply of the country was referred to by Dr. James Wheatley in his last quarterly report to the Shropshire county council. He said that he had had some correspondence with the medical officer of health of Liverpool with regard to tuberculous cattle on a Shropshire farm. Although there did not seem to be any likelihood of the milk from the suspected cows being disposed of locally the whole correspondence disclosed as a very distinct danger that they were dependent altogether upon the good faith of the dairyman. The large towns were effectually protecting themselves but their action would be at the expense of the country districts unless those districts could take steps to insure that milk which was prohibited from being sold in towns was not sold locally.

Shropshire County and District Councils.

Upon more than one occasion district councils in Shropshire have appeared to resent recommendations in connexion with sanitary administration which from time to time have been made by the county council. The county medical

officer of health recently had occasion to make certain inquiries and to take samples of water in the Bridgnorth rural district and the rural council, taking exception to his action, sent a communication on the subject to the Local Government Board. The Board having asked for the observations of the county council that body replied that having regard to the general responsibility cast upon the county council to ascertain the sanitary condition of the county the reports and surveys of the medical officer of health were quite necessary and were for the good of the county generally. The county council disclaimed any desire or intention to encroach in any way upon the rights or duties of the district council. The Local Government Board has fully supported the contention of the county council and has expressed the opinion that the county council is doing very useful work which may properly be continued.

Feb. 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scottish Women Graduates and the Parliamentary Franchise.

AS mentioned in THE LANCET some weeks ago the women graduates of the Scottish Universities claimed at the recent election the right to vote. The registrars refused to send them voting papers on the ground that according to the ordinance they were "otherwise disqualified." It was also mentioned that a committee had been formed to take steps to assert their claim. This committee has now sent out a circular asking for subscriptions in order that the question may be tested legally. They do so on the grounds that women are not expressly excluded by statute, that inaction on their part would prejudice the question of women suffrage in general, and that if it could be established that one group of women were competent to vote it would alter the whole aspect of the question of the franchise for women. The committee asks for £1000.

The Ayr District Asylum.

The annual report of this asylum contains matter of more than local interest penned by the superintendent, Dr. C. C. Easterbrook. He points out in the first place that in Ayrshire the ratio of insanity to population tended to fall and that this was in accordance with the observation of Dr. John Macpherson—namely, that the ratio of insanity to population tended to be low in communities with a rising population and high in those with a falling population. He makes a useful classification of cases of alcoholic insanity, dividing them into three groups: (1) the true dipsomaniac who only occasionally finds his way into the asylum; (2) the careless or ignorant drinker who constantly takes more than is good for him and some day has a breakdown and "gets a fright." (This type forms the large proportion of the cases of alcoholic insanity in asylums. They often recover and they do not return, one lesson having been enough for them.) (3) The alcoholic deteriorate or chronic inebriate who as the result of prolonged habits of vicious indulgence has spent his money, mind, and morals in drink. He is usually beyond redemption and seldom recovers. Dr. Easterbrook further mentions that in connexion with the pathological department of the asylum a research laboratory has been started and that he and his two assistants are engaged on an investigation into a kind of insanity which seems to arise as a toxæmia from the alimentary tract. It is characterised by great mental confusion or stupor and muscular rigidity or resistiveness.

Medical Gathering in Edinburgh Royal Infirmary.

A large medical gathering took place in the Edinburgh Royal Infirmary on Feb. 16th. The meeting was organised by the local branch of the British Medical Association and is an annual gathering. It is largely attended by practitioners outside Edinburgh and much is done to show them what may interest them. There was an excellent exhibition of pathological specimens in an unoccupied ward, a lecture was delivered on Eczema with a demonstration of cases, and there were operations, electrical demonstrations, and a demonstration of clinical cases of interest in one of the large theatres. A time table which was strictly adhered to enabled a large programme to be carried through. The meeting was presided over by Dr. W. Allan Jamieson. In the evening there was a "morning dress" dinner in one of the hotels. The convener of the public health committee of the town council was present and in replying to the toast of the "Lord Provost and Magistrates" he held out the hope that part of the old city hospital would be converted into a hospital for hopeless cases of pulmonary tuberculosis. The need of such a place is severely felt in Edinburgh and the possibility of the arrangement indicated being carried out was received with much satisfaction.

The Edinburgh Water.

A small sensation has just been caused in Edinburgh by the discovery that water fleas had found their way into some of the house water-cisterns in Edinburgh, and had also been found in great numbers in and about street hydrants. This little animal is of historical interest in Edinburgh, for nearly 30 years ago it was its real or supposed prevalence in the neighbourhood of St. Mary's Loch which largely prevented that loch being used as a great source of water-supply for the city. It is of course being suggested that the present discovery of the insect is associated with the new water-supply from the Talla. The whole matter is being investigated by Dr. A. M. Williamson, the senior sanitary inspector for the city, and his report is looked for in the course of some days.

The Pathological Department of the Edinburgh Royal Infirmary.

Many of the more recent graduates of Edinburgh will be disappointed to know that the two assistant pathologists in the Royal Infirmary, Dr. Stuart Macdonald and Dr. G. Lyon, have resigned their appointments. Dr. Macdonald is to continue to lecture on pathology in the extra-mural school, but Dr. Lyon, it is understood, abandons the pursuit of pathology for practice. The infirmary managers are advertising for two assistant pathologists to take the places of the two gentlemen who have resigned and also for a clinical pathologist to be largely responsible for the increasing amount of work required of the department by the sending of clinical material from the wards for examination.

The Edinburgh Dispensary for Skin Diseases.

The annual meeting of the supporters of this institution was held on Feb. 16th. Mr. J. B. Sutherland, S.S.C., who presided, said at the outset that the institution fulfilled a special and an exceptional necessity in the city, and it was not one of those institutions which could be charged with overlapping. The committee's report, submitted by Mr. George Stewart, S.S.C., honorary secretary, stated that the year had been one of continued prosperity and satisfactory results. According to the report of the medical officer, Dr. A. Minto M'Donald, 773 individual cases were treated during the year at the dispensary. The number of actual attendances was 3147, giving an average daily attendance of 20 patients. Prescriptions dispensed to those patients whose circumstances entitle them to be supplied gratuitously numbered 608. The number of patients who have received medical assistance since the dispensary was founded, and up to Dec. 31st, 1905, was 8652. In supplementing his report the medical officer commented on the prevalence of ringworm among children and said that he thought of mentioning that the School Board might have introduced a school for such cases. It had been found, however, that the length of time during which these cases required to be under treatment had been considerably reduced through the application of the Roentgen rays. He was sorry to say that their institution was up to the present deficient in that respect and the committee might take that into consideration. The honorary treasurer's report showed the income to have been £245 12*s.* 11*d.*, and the year to have closed with a balance of £2 17*s.* 1½*d.* Lord Salvesen, in moving the approval of the report, remarked on the good which the institution was doing. Bailie Douglas seconded the motion and the report was unanimously adopted. Votes of thanks were awarded to the collectors and others, on the motion of the Rev. A. B. Morris, and the institution was recommended to the increased liberality of the public.

Lady Medical Assistant for Glasgow.

The Glasgow corporation has appointed Dr. Lily Smellie, at a salary of £166 per annum, as lady medical assistant to act under the direction of the medical officer of health in connexion with the work of the sub-committee on infantile mortality.

Feb. 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Banquet to the Lord Lieutenant at the Royal College of Surgeons in Ireland.

On Feb. 17th the Viceroy was entertained at a banquet held at the Royal College of Surgeons in Ireland. His Excellency on arriving at the College was received at the entrance by Sir Arthur Chance, the President, who conducted him to the board-room where there was a large gathering of Fellows. Surgeon-General Alfred H. Keogh, C.B., Director-General of the Army Medical Service, and Dr. A. E. Wright, pathologist to St. Mary's Hospital, London, and late professor of pathology in the Army Medical School at Netley, who were to receive honorary Fellowships of the College, were then introduced to the President. After conferring the Fellowships the President handed the diplomas to the new Fellows, who then signed the roll, and the President introduced them to the Lord Lieutenant. A third honorary Fellowship was conferred *in absentiâ* on Dr. Henri Hartmann, professor of surgery in the Paris Faculty of Medicine, and surgeon to the Hôpital Lariboisière, who was unfortunately suffering from indisposition and unable to be present. At the commencement of the proceedings the Vice-President of the College, in introducing Surgeon-General Keogh to the President, said that he was a graduate of the Royal University of Ireland and that he had done valuable work both during the South African war and subsequently on the reorganisation committee of the Royal Army Medical Corps. Of Dr. A. E. Wright the Vice-President said that he was a graduate of the University of Dublin, had been professor of pathology in the Army Medical School at Netley, was now pathologist to St. Mary's Hospital, London, and had carried out extensive and brilliant researches on the physiology and pathology of the blood and had discovered inoculable serums protective in some degree against diseases of microbial origin. At a banquet which subsequently took place the President of the College, in proposing the health of the Lord Lieutenant, said that they were fortunate in being the first Irish public body privileged to offer him hospitality.

Royal College of Surgeons in Ireland.

In the Examination Hall of the Royal College of Surgeons on Feb. 19th an interesting lecture dealing with therapeutic inoculation was delivered by Dr. Almroth Edward Wright, late professor of pathology in the Army Medical School, Netley. Dr. Wright, who was warmly received, dealt at the outset with the various principles of inoculation and having explained the resistance of the blood against bacilli under normal conditions demonstrated by means of a series of charts the action of inoculation as regards the raising of the power of resistance. Readers of your columns, in which Dr. Wright's work has so regularly appeared, will require no digest of this able discourse.—Mr. H. R. Swanzy, in proposing a vote of thanks to Dr. Wright, said that even though Dr. Wright proposed to obliterate medicine altogether they could not help being grateful to him for his discourse.—Dr. E. H. Bennett seconded the motion, which was carried unanimously.—The President of the College, in conveying the vote of thanks, said that he felt personally indebted to Dr. Wright for his kindness in connexion with the delivery of the lecture.

Ulster Medical Society.

The fourth meeting of this society, which was devoted to a clinical demonstration of cases, was held in the Medical Institute, Belfast, on Feb. 15th, Dr. W. Calwell, the President, being in the chair.—The President showed: (1) A case of Onychauxis; (2) a case of Bilharziosis with Urine; (3) a case of Actinomycosis under X Ray Treatment; and (4) a case of Heart Disease with Enlarged Liver and Spleen.—Professor T. Sinclair showed the result of a Skin-grafting Operation after the Removal of a Rodent Ulcer.—Professor J. A. Lindsay showed: (1) A case of Thoracic Aneurysm; (2) a case of Muscular Atrophy; and (3) a case of Nervous Disease for diagnosis.—Dr. H. L. McKisack showed a Pathological specimen of an Aneurysm of the Basilar Artery.—Dr. John McCaw showed some interesting cases of Disease in Children.—Dr. W. M. Killen showed a case in which a Wound in the Sclero-corneal Region was treated by the flap method.—Mr. A. B. Mitchell showed: (1) A case of Epithelioma of the Tongue undergoing the trypsin treatment; and (2) four cases of Gastro-enterostomy which were operated on during the last six weeks.—Dr. W. B. McQuitty, Dr Robert Boyd, and Dr. S. H. G. Blakely showed two cases of General Paralysis.—Dr. J. S. Morrow showed a case of Exopthalmic Goitre.—Dr. Cecil E. Shaw showed a case in which Laryngotomy was performed for a Papillomatous Tumour in a child.—Mr. Robert Campbell showed the result of operation on several cases of Club Foot.—Mr. Andrew Fullerton showed a case in which the entire lower lip was removed for an Epithelioma. Dr. Thomas Houston showed: (1) A case of Functional Spasm of the Lower Limbs in a child; and (2) a case of Psoriasis treated by thyroid extract.

Home Office Appointments in Belfast.

In consequence of the death of Dr. H. S. Purdon, the position of certifying factory surgeon in Belfast became vacant and the Home Office authorities have divided the post and have appointed two medical men instead of one as formerly to do the work. It was generally supposed in Belfast that the appointments rested with the Right Hon. Herbert Gladstone, M.P., the Home Secretary, but it is authoritatively stated that Dr. B. A. Whitelegge, C.B., His Majesty's chief inspector of factories, has the right of nomination. There were over 30 candidates and Dr. John E. MacIlwaine and Dr. E. B. Purdon (whose father and grandfather held the post) have been appointed. Another change made is that the area superintended by Mr. C. J. Milligan, who is certifying factory surgeon for the Ligoniel district, has been considerably extended.

Consumption in Ireland.

In the Belfast *News-Letter* of Feb. 17th Mr. R. Brown, honorary secretary of the Ulster branch of the National Association for Prevention of Consumption, writes a very interesting letter on tuberculosis in Ireland. He points out that in 1903 there were 12,180 deaths from this scourge in Ireland, while in 1904 the numbers have increased to 12,694, which is as if the town of Dundalk, Galway, or Newry were every year swallowed up with all its inhabitants. Now, while Ireland is steadily getting worse every other civilised country is successfully trying to stamp out this plague, as the following figures, giving the deaths from consumption per 10,000 of the population, show:—

	England and Wales.	Ireland.
1870-75	24	19·5
1895-1900	14	21·3
1903	12	21·7
1904	—	22·3

Thus the people in Ireland, where the immense majority of the population live in pure country air, die more than twice as fast from consumption as those who live in smoky Oldham or Blackburn. Mr. Brown attributes this deplorable state of affairs to ignorance and dirt. 40 years ago the workman lived on oatmeal porridge, potatoes, and buttermilk; now it is white loaf bread and stewed tea. Buttermilk is rapidly becoming a thing of the past; instead there is nothing but separated milk, without a particle of fat, and often tainted and undrinkable. While creameries have raised the bank deposits they have tended to deteriorate the race. The havoc done by drink in directly preparing the way for an attack of consumption is obvious. Mr. Brown points out the need of education in health matters and especially the plain education that will enable the Irish people to read what is put before them—the very thing that many of the children are not getting. In Dublin (actually under the very eye of the National Board) there are 65,800 children of school age; of these, 28,500 are not on the school rolls and those that are attend only seven days out of ten. There are districts of Ireland where 70 per cent. of the population cannot read, and this after 30 years of free education. Mr. Brown wisely suggests that it is necessary to convince the people that consumption is an infectious disease, its occurrence being aided by bad food and bad air and to try to raise the standard of health. Notification of the disease and where proper precautions are not taken removal of the consumptive from his home to an institution where he would be cared for and would cease to infect the rest of the family are necessary. People instead of getting a "bottle" from a druggist for a cough should obtain proper medical advice and they should shun all advertised "cures" as useless. The plan adopted at Brighton of taking patients for a month's treatment into a sanatorium has much to commend it for its educating influence, and the patient at home should carry out these rules: no spitting, no alcohol, open windows, and care in the matter of proper wholesome

food. Mr. Brown's letter has attracted a great deal of attention as coming from one who has thoroughly studied the question and who is a great enthusiast.

Proposed Erection of a Sanatorium in Co. Cork.

About 12 months ago 28 public bodies in the county of Cork combined together and agreed to levy a rate of 1*d.* in the £ for the establishment of a sanatorium. A conjoint board consisting of 56 members was duly formed. They advertised for sites and engaged to assist them in the matter the expert services of Mr. J. C. Smyth, the proprietor of Altadore Sanatorium. Mr. Smyth made an exhaustive search of the county Cork for a site and eventually named three as the best he could find. One of the three, Mountmassey, after considerable deliberation, was selected and the sanction of the Local Government Board was sought. Dr. T. J. Browne and Mr. O'Brien-Smith, C.E., Local Government Board inspectors, were instructed to hold a sworn inquiry which commenced last Monday and ended the following day. Mr. Smyth gave evidence with regard to the points in favour of Mountmassey which he said were numerous, but as he had no definite knowledge with regard to the climatic conditions of the locality he would not commit himself to absolutely recommending it. Professor H. Corby, a member of the conjoint board, in the course of his evidence stated he did not believe that a really ideal site could be had in the United Kingdom. He explained that the board had taken infinite pains to secure a suitable site, and though fault could be found with Mountmassey, as with most other sites, he would recommend that it should be adopted, especially as he believed that if that course were not taken the sanatorium project would be given up. Dr. R. Barrett, who had been many years medical officer of the Macroom union, in which Mountmassey is situated, stated that he had lived at Mountmassey for more than a year. He had found the place very healthy. It was well sheltered, there was much sunshine, and the air was bracing. Mr. P. O'Donoghue, dispensary medical officer of Macroom, gave similar evidence and referred to the low death-rate from tuberculosis in the district. Dr. C. Theodore Williams stated that the site was an unsuitable one for a sanatorium. He said that the position was not sufficiently sheltered and that portions of the town of Macroom which adjoined it were in an insanitary condition. As is too often the case, the expert evidence given before the inspectors was rather contradictory. Whilst Mr. Smyth could find many things to recommend Mountmassey Dr. Williams was somewhat emphatic in its condemnation. Again, Dr. Williams considered another site called Myshall would be suitable and Mr. Smyth who had visited it last summer stated that patients could hardly live there owing to the great heat. The inspectors announced that the decision of the Local Government Board would be given in about three weeks.

Feb. 20th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Diet in Scarlet Fever.

AT a meeting of the Hospitals Medical Society held on Feb. 2nd M. Guinon and M. Pater communicated a paper in which the good effects obtained by them in scarlet fever treated with a chloride-free diet were summarised. The patients were children, from five to ten years. These children were divided into two groups. One group was kept upon an absolute milk diet and the other group was put upon a chloride-free diet as soon as the temperature fell to normal—that is to say, from the fourth to the sixth day of the disease. The children forming this latter group passed urine frequently and eliminated much more urea than the children who were placed upon a milk diet. The weight curve ascended rapidly and convalescence was accelerated, while in no case was any albuminuria observed. At the following meeting of the same society M. Henri Dufour continued the discussion on the question. He said that since the month of June, 1905, he had studied the question in 107 cases and previously to that date he had studied 268 cases. Of this total of 375 cases only six patients died. M. Dufour attributed at least a part of these good results to a solid diet made up of various elements but containing only a limited amount of chloride. One patient suffered from nephritis and she died. Other patients had traces of albuminuria which, however, always cleared up when chlorides were omitted from the diet and when the patient was kept in bed.

The Administration of Chloroform in Cases of Mental Disease.

At the meeting of the Surgical Society held on Jan. 31st M. Picqué read a paper on the above subject. He gave instances of 643 cases of anæsthesia brought about in various cases of mental disorder in the Asylum of St. Anne. In cases of morphine mania it was necessary to give the patient a dose of morphine before giving the chloroform. Alcoholic patients who had been in the asylum some time and who had not recently been exposed to the alcoholic poison took the anæsthetic very well. Those, however, who had been recently under the influence of alcohol exhibited a good deal of excitement. M. Picqué recommended that hysterical and epileptic patients should be rapidly brought under the anæsthetic.

Growth of Parisian Children between the Ages of 1 and 15 Years.

At the meeting of the Academy of Sciences held on Feb. 5th M. Variot and M. Chaumet gave an account of their researches upon 4400 Parisian children of an age between one and 15 years. The statistics were carried out in groups of at least 100 children for each sex and for every year of age and no child who was a foreigner, who was ill, or who was abnormal, was included in the groups. The curves constructed upon the figures showed that both boys and girls followed an absolutely parallel course as regards height from one to 11 years. From this latter age up to 15 years the girls shot ahead. The weight curve gave analogous results. From one to eight years the boys showed a slightly greater weight. Afterwards from eight to 15 years the excess of weight was on the side of the girls.

Aristol in Ulcerative Stomatitis.

It has been the custom to treat ulcerative stomatitis in children by application of iodoform. This treatment, which was introduced by Parrot, gave good results, but the disagreeable odour of the iodoform is a marked objection. Struck by this fact, M. Gallois has taken to using aristol instead of iodoform and at the meeting of the Therapeutical Society held on Jan. 24th he mentioned that the results were quite satisfactory. M. Barbier and M. Dubois considered that washing the mouth with a solution of peroxide of hydrogen, one-third strength, gave good results. M. Danlos in the case of ulcerative stomatitis in adults uses chromic acid. As, however, this substance is poisonous the patient must well wash out his mouth after each application.

Reform in Sanitary Regulations for Emigrants.

At a meeting of the Academy of Medicine held on Feb. 7th M. Chantemesse and M. Borel communicated a paper in which they reminded their audience of the extreme severity with which the United States defended their frontier as against invasion by emigrants. Any emigrant disembarking at a United States port has to run the gauntlet of an examining board, which turns back anybody whose papers are not *en règle* or who does not possess a certain sum of money. The United States further insist upon all French maritime transport companies allowing on board American physicians to inspect French emigrants and often at Havre the American Consul stops emigration for America of any emigrant coming from a country where cholera is known to exist. The Consul insists upon all emigrants being kept under observation in the port for five days even though the French sanitary service has authorised them to travel freely through French territory. Such emigrants are quite free to wander about Havre and to go to the hotels and public places, so that there is some risk of their spreading whatever germs they may be infected with. Reciprocity by no means exists. Emigrants are examined at Havre by the medical officer of the French Maritime Transport Company and by an emigration medical officer, but this examination is simply to sift out the emigrants whom the United States would refuse and whom the company would then have to bring back to France at its own expense and also to see that they were all vaccinated. M. Chantemesse and M. Borel implored the Academy to say that France should organise in her turn a strict examination of emigrants, and particularly of Orientals, *en route*. Besides the medical inspection at Frioul, and disinfection if necessary, such emigrants should only be allowed to stay in the country for as short a time as possible and for this reason there should be organised at Marseilles regular "camps" whence emigrants should be sent directly to the

port of embarkation without stopping *en route*. Another camp should also be organised at these ports wherein any "suspect" should be kept under surveillance. Such "suspects" would then be sent directly to hospital or to special observation buildings where they would be under sanitary surveillance and could be disinfected if such were considered necessary.

A Bullous Eruption following the Administration of Quinine.

At the meeting of the Hospitals Medical Society held on Feb. 7th M. Thibierge read a paper describing a bullous eruption which had followed the taking of quinine by a woman who suffered from a similar eruption after taking antipyrin. The case was interesting, for after having had six attacks of the eruption after taking antipyrin the patient suffered from an exactly similar eruption after taking quinine, although it was not quite so acute as that caused by the antipyrin.

Calcium Salts as a Preventive of Eruptions after the Injection of Sera.

At the meeting of the Society of Biology held on Feb. 10th M. Netter read an account of the good results which he had obtained by the use of calcium chloride in doses of one gramme per day for the prevention of the eruptions which so often follow the injection of antidiphtheritic serum in children. The salt was given on the day of injection and on the two following days. M. Netter's figures related to 516 children. Of these, 258 were treated by serum alone and the other 258 were given calcium chloride as well as the serum. Of the latter group only 6 per cent. exhibited eruptions, while of the former 40 per cent. were affected.

Feb. 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Marmorek's Antituberculous Serum.

Dr. Marmorek's antituberculous serum is comparatively seldom used in Germany, where the unfavourable results obtained with Professor Koch's tuberculin are still remembered, and the consequence is that any new antituberculous remedies are regarded with some distrust. In a recent article published in the *Berliner Klinische Wochenschrift* Professor Stadelmann and Dr. Beufey of the Friedrichshain Hospital in Berlin expressed a distinctly unfavourable opinion with respect to Marmorek's serum. It was tried in five cases, all of which afterwards showed an aggravation of the symptoms. The temperature of the patients always rose and the temperature of some who were not at the time feverish rose at once to 39° C. The pyrexia continued for six or eight days and sometimes it assumed a remittent, hectic type which disappeared when the injections were stopped. Urticaria, erythema, and swelling of the glands causing discomfort to the patient were also observed, in addition to which giddiness and nausea sometimes appeared. The cough, expectoration, and night sweats showed no improvement whatever and the general state of the patients was obviously aggravated. In the first instance ten cubic centimetres of the serum were injected daily into the abdominal wall for a week and then after an interval of a week the injections were continued in the same way during the third week. On the advice of Dr. Marmorek the injections were then made in another way, so that the first injection consisted of only six cubic centimetres and after two injections an interval of two days was allowed to elapse, but the results obtained in this way were no better than before and the treatment was therefore abandoned.

Proposed Modifications in the Organisation of International Congresses.

The German committee for the International Congress to be held at Lisbon recently adopted a motion proposed by Professor von Waldeyer to the effect that a permanent international board should be created in connexion with the international medical congresses. The offices of the board should be in Paris, the members being the presidents of the previous and the forthcoming congress and of the individual national committees. The board would decide what sections were to be formed, what subjects were to be brought before the congress for general discussion, and who were to be appointed as official speakers. Moreover, it would, in conjunction with the committee of organisation, elect the honorary president and other officials of the congress. The board would also settle any differences of opinion which might arise between the committee of organisation and the representatives of the special branches of medicine and would take measures to prevent the holding of special congresses during or immediately either before or after an international medical congress. Another suggestion was made that international medical congresses should take place not oftener than every fifth year, as the present interval of three years was not sufficient for the preparations incidental to the meetings. These recommendations of the German committee will be communicated to the other national committees for consideration in due course.

An International Hygienic Exhibition.

An International Hygienic Exhibition will be held in Dresden in 1909 and some preliminary steps in the matter have already been taken by a committee presided over by the mayor of Dresden. This committee includes representatives of the Imperial Government and of the governments of the German States and a recent meeting was attended by a good many of the leading German hygienists and other medical men, such as Professor Fraenkel of Halle, Professor Dunbar of Hamburg, Professor Gärtner of Jena, Professor Neisser of Breslau, Professor Pannwitz of Berlin, and others, who expressed their approval of the scheme. An honorary committee, including the Imperial Chancellor and the representatives of foreign States, will be elected. The exhibition is intended to show to the medical profession and the public the progress of hygiene during recent years. It is to be hoped that foreign States will participate in this highly interesting and useful work.

The late Professor Gusserow.

An announcement has appeared of the death of Dr. Carl Gusserow, late professor of obstetrics and diseases of women at the University of Berlin. Professor Gusserow was the son of a well-known medical practitioner and was born in 1836 at Berlin. He received his medical education at Würzburg, Prague, and Berlin, and graduated in 1860. He at first devoted himself to medical chemistry but afterwards became an assistant to the celebrated obstetrician, Professor Martin of Berlin. In 1863 he travelled in France and England for the purpose of studying operative surgery and gynæcology. In 1867 he was called to Utrecht in Holland as ordinary professor and in 1868 to Zürich in Switzerland, where he remained until 1872, when he was appointed ordinary professor of obstetrics at the new University of Strasburg. In 1878 he returned to Berlin and held the professorship of obstetrics till 1905, when he resigned in consequence of failing health. His scientific publications are not numerous but as a teacher he was highly appreciated by the students. His writings include essays on growths of the sexual organs and on the state of obstetrics in Great Britain. Of his former assistants several have become well-known obstetricians and surgeons, among whom may be mentioned Professor Runge at Jena, Professor Wyche at Zürich, and Professor Dührssen at Berlin.

The German Congress of Internal Medicine.

The twenty-third German Congress of Internal Medicine will meet at Munich from April 20th to 26th. Professor Strümpell of Breslau will preside. The official subjects of discussion will be (1) the Diseases of the Thyroid Gland, to be introduced by Professor Kraus of Berlin and Professor Kocher of Bern; and (2) Cardiac Anomalies, to be introduced by Professor Hering of Prague. Papers will be read by Dr. Feinberg of Berlin on the Causes and Prophylaxis of Malignant Growths, by Dr. Paessler of Dresden on Anuria, and by Dr. Krause of Breslau on Lipæmia in Diabetic Coma.

Feb. 19th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Passive Resistance amongst the Country Practitioners.

FOR several months the dispute between the practitioners and several boards of the Diet of Lower Austria has been dragging on, until at last the continued neglect of the petitions of the medical men by that body has brought about a state of affairs which may be described as a medical strike. The official term for it is passive resistance, and it consists in the refusal of the practitioners to do certain kinds of work for which they are either paid at a ridiculously

low rate or not at all. The first relates to public vaccination, for which the country practitioner gets the sum of twopence per person, and the second pertains to the notification of infectious diseases. The official who is at the head of the sanitary department of the Diet has so often ridiculed and offended not only the petitioners but medical science as a whole that at last the "new organisation," a very vigorous society of country practitioners, took up the fight. The "strike" is carried on in such a way that throughout the whole country all medical practitioners are unanimous in their work. Every case where there is even a vague suspicion of any infectious disease is now notified to the district officer of health, who is paid by the Diet, as being suspicious of scarlet fever, of diphtheria, of smallpox, and so on. That officer is bound by law to examine each such suspicious case; formerly cases were only notified to him when the practitioner had satisfied himself that he had to do with an infectious disease and had come to a definite diagnosis. Thus in the first week of the "resistance," which began on Feb. 1st, more than 10,000 cases were reported as "suspected" of some infectious disease or other, a number of patients far in excess of that which the district medical officers can examine thoroughly. As the medical boards of Austria have declared their sympathy and their desire to bring the dispute to a successful end the Diet will soon find itself unable to postpone the long-promised new regulations which would improve the pecuniary conditions of the country practitioner. Meanwhile, monetary help is coming from all sides, the "new organisation" having received upwards of 8000 kronen for the strike fund during one week. It is also thought that the Government will order the Diet to arrange matters, as grave danger is sure to arise out of such a state of affairs.

Proposed Hygienic Exhibition in Vienna.

The committee for the hygienic exhibition to be opened in Vienna in June next comprises a number of physicians and apothecaries, besides trade representatives and boards interested in hygiene. The general idea is to have the exhibition arranged strictly upon medical and scientific lines. Amongst other departments the one which will, no doubt, find greatest interest is that proposed by Professor Escherich, the director of the first children's hospital, which will be called the infants' department. It is to comprise six rooms. One room will be devoted to the exhibition of a "couveuse" and of the beds in use in the infants' room of the hospital, with all apparatus for washing and cleaning, all kinds of artificial food, clothing, in short, all the things appertaining to the baby as long as they are in accordance with the principles of usefulness, hygiene, and asepsis. The second room will be devoted to the needs of a baby beginning to walk; it will show all kinds of baby chairs and walking apparatus. In the third room it is proposed to show how a nursery should *not* be furnished; it will contain, therefore, thick carpets, milk-bottles with long indiarubber tubes, furniture with sharp edges, and similarly dangerous things. The other three rooms will contain a collection of the various things relating to the sterilisation of milk, the examination of food and milk, and milch cows and their manner of feeding. In other departments, it is expected, will be placed tables referring to epidemics; it will be shown how a ward should be, and how a sick room should not be, furnished; and the model of a modern aseptic operating theatre will be exhibited also. Besides, negotiations have been entered into to induce several authorities on hygienic matters to lecture at short intervals on public hygiene in a not too scientific way for the instruction of the visitors.

Torsion of the Spermatic Cord.

At a recent meeting of the Surgical Society Dr. Liechtenstern showed a man, aged 46 years, on whom he had operated on account of an acute swelling of the left half of the scrotum. The man had been taken to the hospital, having been seized with very severe pain six hours previously when lifting a heavy load; soon afterwards the scrotum became enlarged and vomiting and constipation ensued. At first an incarceration of an inguinal hernia was thought of but the medical practitioner who saw the patient first did not succeed in reducing the hernia. When taken to the ward the patient's temperature was 102° F. and the pulse was bad. The scrotum showed a large tense tumour and above, in the inguinal canal, there was another smaller tumour. When the scrotum was opened it was found that the large tumour was an enormously swollen blue testicle the funis spermaticus of which was also dark blue and twisted to 360°. In the open annulus inguinalis internus part of the omentum was visible. The testicle was untwisted, the funis was resected, and the testis was extirpated, and then the open inguinal canal was closed as in herniotomy. The sudden attack was due to a torsion of the spermatic cord and the surgeon satisfied himself that on the right side the testis had also been in the inguinal canal until the patient's sixteenth year.

Vaccination under the Influence of Red Light.

Dr. Goldmann has just read a paper before the Clinical Society on his experiments as regards vaccination under red light. Influenced by Gärtner's result of treatment of varioloids and variola, he systematically vaccinated the children in a photographic room which was illuminated by a photographic lamp and bandaged the arm with calico which was saturated in a 10 per cent. solution of eosin. In order to test the exactness of the bandage sensitive photographic paper was inclosed under the bandage with the sensitive side laid outward. When the bandage was removed only those cases were taken into consideration in which the paper had remained unchanged. The time from the vaccination till the removal of the bandage varied from five days to three weeks. The pustules developed normally but the areola was only from one to two millimetres wide. There was no swelling of the axillary glands and no pain occurred in the arm with the red bandage, whilst the other arm, which was vaccinated also under red light but had been subjected to the influence of diffused daylight, showed inflammatory symptoms. The children with the red bandage had also no rise of temperature. Dr. Goldmann made another series of experiments. He vaccinated the children under red light, bandaged them with red calico, and left the bandage for four days; then he exchanged it for the usual white bandage which is permeable by the chemical active rays; he found that the pustules and the swelling were much larger, just as if he had applied only white light. If he covered normally vaccinated inflamed arms with red bandages he was able to reduce the inflammation, but if the vaccination had produced an abscess the red bandage had no effect whatever. Vaccination under red light has now been carried out for a period of one year and Dr. Goldmann is preparing to revaccinate the same children year by year to find out how long this effect will last.

Feb. 17th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

A Bequest of 2,000,000 Francs for a Hospital.

THE late Mme. Hélène N. Zarifi, a Greek lady well known in Constantinople for her works of philanthropy, has bequeathed in her will a legacy of 2,000,000 francs for the construction of a large hospital in the city. 600,000 francs are assigned for the buying of the proper site and for the necessary furniture, the rest of the large sum being allocated to the continual upkeep of the hospital. A plot of ground will probably be bought in the city quarter Shishli, best adapted for an institution of that kind. All poor patients of the Greek nationality will be admitted free of charge, while patients of other nationalities will have to pay a moderate fee for admission. According to the will of Mme. Zarifi a bust of her husband will be placed at the entrance door of the hospital.

Municipal Medical Men in the Provinces and their Salaries.

The Ottoman Government is at present taking the strictest measures with a view to the allowances of the provincial medical men engaged in State service being promptly and regularly paid. The deplorable state of these medical men has already been referred to in THE LANCET.[1] To the very grievous conditions enumerated in that article is added the fact that the salaries of the State physicians of the provinces, as of all officials engaged in the Ottoman Government service, are hardly ever regularly paid. The Turkish newspaper *Ikdam* lauds in high terms the intentions of the Sublime Porte to amend this pitiful state of affairs and rightly remarks that the irregular payment of the allowances of municipal physicians must needs have a very untoward result upon the general state of health of the population. The Ottoman Government has already on several occasions sent peremptory orders to provincial authorities to see that such

[1] THE LANCET, Sept. 16th, 1905, p. 840.

unsatisfactory conditions should no longer continue. These orders have had, however, little effect. Several presidents of provincial municipal councils have entirely neglected the repeated commands of the Sublime Porte. These presidents will now be replaced.

The Ravages of Phylloxera on the Island Mitylene.

On the island Mitylene, the ancient Lesbos, great extents of excellent vineyards have been completely destroyed by phylloxera. A large proportion of the grapes of this island is used for making raisins. Most of the crop, however, is employed for the production of wine and the so-called *raki* (a strong alcoholic beverage). The island makes of the latter about 100,000 okes annually and of the first about 1,000,000 okes. The agricultural inspector of the vilayet Aidin has been sent to Mitylene with instructions to take the necessary measures for preventing the spread of phylloxera.

The Medical Men of Alexandria and their Fees.

From Alexandria comes the news that the Egyptian Government has increased the stipends of medical men employed in the State service in view of the fact that living there has become of late very expensive. The Council of Physicians of Alexandria decided during the last general conference to fix the fees of medical men at a higher rate. The scale of charges, as arranged by the council, will henceforward be as follows: for a visit at the house of the medical man, 40 piastres; for the subsequent visits, 30; for a call at the house of the patient, 50 piastres, if the latter lives in town; if in the suburbs, 60 piastres. A shilling represents about six piastres.

The Mecca Pilgrimage.

In consequence of a recent decision of the Conseil Supérieur de Santé, all the pilgrims leaving the Hedjaz for Ottoman ports will be submitted to a medical observation for 48 hours and to a strict disinfection at the lazarets of Beyrout, Clazomènes, and Tripoli in Africa. Besides, those pilgrims who leave for seaports of the Marmora, for Constantinople, and for the Ottoman harbours of the Black Sea will have to undergo a last medical examination at their passage through the Dardanelles. The same sanitary measures will be taken with regard to Russian pilgrims. Should these, however, prefer to go directly to Russia they will have to embark upon specially chartered steamers which will traverse the Dardanelles and the Bosphorus without touching any port with the exception of Clazomènes, Beyrout, and Cavak where also the necessary provision will be taken.

A New Hospital.

A new hospital for the poor is being constructed at Memuret-ul-Aziz. To facilitate the works it has been proposed to the Sublime Porte to impose an extra tax of 20 paras (one penny) upon every oke of silk cocoons.

Increase in the Production of Opium.

The production of opium in the vilayets of Konia and Aidin has considerably increased of late. The exportation has also augmented. As the cultivators of opium in those vilayets indulge in the practice of adding extraneous matters to it the authorities have taken measures to prevent this practice in order not to injure in any way such a satisfactory and profitable increase of the valuable product.

Dysentery in Mitylene.

News comes from the island of Mitylene that an epidemic of dysentery has broken out among the children there and that the mortality due to this disease is rather great. The outbreak is attributed to the bad quality of water used on the island.

A Suicide's Gift to a Hospital.

A wealthy Greek inhabitant of Smyrna recently committed suicide by throwing himself into the sea. In his pocket a letter was found giving reasons for the rash act and desiring a large sum of money to be given to the Greek Hospital.

The Prevention of Epizootics.

The Ministry of Foreign Affairs, complying with a demand of the Ministry of Agriculture, Mines, and Forests, has sent to all the Ottoman consuls abroad very strict injunctions henceforward to keep the Sublime Porte informed of any outbreak of an epizootic in the countries where they are serving. This measure is intended to prevent the importation of diseased or infectious animals.

Feb. 15th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Forthcoming Census for the City of Bombay.

A CENSUS is to be taken in the city of Bombay on the night of Friday, Feb. 9th. It has long been felt that the decennial census of 1901—having been held while plague was raging in the city—was misleading and that the statistics based on it gave a false impression of the health of the city. The return of 776,000 indicated a decline in the population but it must be remembered that probably 100,000 were killed by plague before 1901. It is probable that the large immigration which is always taking place may have brought the population back to its old numbers, but there is also the fact that over and above the mortality from plague the death-rate from all other causes has been very high; even for last year it was 54·99 per 1000. The inquiries for the coming census will not be nearly so full as heretofore, but name, residence, nationality, sect or religion, age, occupation, and birth-place will be the chief particulars. No person will be called upon to tell the official the names of the female members of his family nor will any female be obliged to mention the name of her husband.

The Plague Policy of the Government of India.

The Government of India has thought it necessary to issue another resolution concerning plague. It is dated Jan. 17th and professes to record the experience of the last five years but it is full of platitudes and contains nothing new. More importance is given to the extermination of rats, apparently following the recommendations of the Paris Convention of 1903, but the remaining items of the policy are disinfection, evacuation, inspection of travellers, segregation, and inoculation as heretofore. We are told now after eight years of plague in India that the experience recently acquired warrants the belief that the systematic destruction of these animals (rats) promises to be one of the most effective measures that can be adopted. Local bodies are to be *encouraged* and assisted to demolish insanitary quarters and in all cases where evacuation is feasible the people are to be *encouraged* to resort to it. Inspection of travellers is considered of most value for protecting limited stations—especially hill stations. On the segregation of the sick the resolution remarks that it has always been unpopular and then goes on to say that "in cases of bubonic plague the necessity for it may be avoided, provided that the surroundings of the patient can be kept clean and free from rats." After this it is hardly necessary to refer to the segregation of "contacts." For the chawls and bustees of the city and for the village huts such a proviso is nothing less than ridiculous. The great fault of this pronouncement of the Government is in its omissions. It dismisses inoculation in a few lines and casually states that it "is of value not merely for the protection which it affords against plague but also by reason of its effect in mitigating the violence of an attack." What is the use of the Government of India hoping that the people may be encouraged to have recourse to it? Here is a remedy which confers immunity at any rate for one year, which only causes a slight and temporary disturbance, has always been optional, and has stood successive tests for eight years, and with all these the Government cannot speak of it in better terms and give it more encouragement. The resolution, however, leaves each local government to make its own rules for dealing with the pestilence. In this and in the various plague resolutions issued during the past few years the caution is reiterated *ad nauseam* that all measures depend for their success upon the coöperation of the people, but it is known throughout India that anything like coöperation is never expected and the most which one looks for is an absence of resistance. Such language as "every effort should be made to enlist their [the people's] sympathies and to bring home to them through their natural leaders and in any other way that may be practicable that it rests mainly with them to bring about by their own action the cessation of plague in India," shows an incapacity to read the character of the Indian people. If we have to wait for this transformation plague will be with us in India for very many years.

The Deferred Recrudescence of Plague.

The course of the present plague mortality throughout India is exceptional. At this season it is usually advancing rapidly, but for the last three weeks it has actually declined.

For the week ending Jan. 20th there were 2938 deaths, as against 4278 a fortnight previously. The figures for the past week are: United Provinces, 1076 deaths; Bengal, 1056; Bombay Presidency, 661; Punjab, 519; Central Provinces, 338; Burma, 119; Mysore, 102; Madras, 47; Hyderabad, 33; Central India, 14; Kashmir, 14; and Rajputana, 4. The comparative immunity of Europeans continues a noticeable feature of the plague epidemic. In the Bombay Presidency, where a quarter of a million of people died from plague in 1905, only 19 Europeans were attacked, of whom ten died; and in 1904, when 316,000 deaths occurred from plague, only eight were amongst Europeans.

Feb. 2nd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Bubonic Plague.

TWO cases of bubonic plague have been reported from Western Australia. One was a fireman on board the *Nera*. The ship's surgeon denied that the case was one of plague and said that the health officers in Sydney and Melbourne who examined the man agreed that the bubo was the result of a strain. The health officers at Fremantle, however, declared the case to be plague and quarantined the vessel and passengers. Another case occurred in a lad, aged 14 years, working in Perth, in the area in which plague last occurred. The case is severe. Six "contacts" were quarantined.

New Milk and Dairy Supervision Act, Victoria.

It is claimed that the new Milk and Dairy Supervision Act, which has just come into force after a prolonged debate and much amendment in the Parliament of Victoria, is a great advance on any legislation on the subject. Its chief object is to bring technical knowledge to the very door of the dairy farmer by means of the supervisors appointed under the Act. These men can only be appointed after having passed a written and practical examination and after producing evidence that they have had practical experience in dairying. They are required to become acquainted personally with every dairy farmer in the district; to have a personal knowledge of the conditions under which the business is conducted; to confer and to advise with the owners on all matters connected with farm animals, premises, utensils, and dairy produce; and to inspect these at dairies, factories, or milk stores, or in transit. In connexion with the supervision of cows the supervisor may prohibit the use of milk from any cow the milk of which he may consider is likely to prove injurious to health and he may put a temporary brand upon such cow. The Minister or the council, as the case may be, will then decide whether the branding is to be made permanent or not. Buildings are required to be erected on dairy farms to comply with the provisions of the Act and the cost of alterations is divided between the landlord and tenant in proportion to the length of time the lease has to run. The Minister can make advances to farmers to the extent of £20 on condition that the money is expended on the better construction and drainage of the farmstead.

Pure Food Act, Victoria.

Another measure passed at the end of the last session of the Victorian Parliament was the Pure Food Act. An outline of its main provisions has been previously given in these columns, but, like the Milk Bill, it was considerably modified in its various stages through Parliament. Under the Act an article will be deemed adulterated when it contains or is mixed or diluted with any substance in any quantity to the prejudice of the purchaser, or any preparation which diminishes its food value or nutritive properties, or when it contains or is mixed or diluted with any substance of lower commercial value than itself; or when it does not comply with any standard for such article which may be set out by regulation; or when it contains any prohibited substance. An article will be deemed to be misdescribed when it bears on the package any false or incorrect label purporting to indicate the nature, purity, or strength. It is obligatory to mark on packages containing articles of food the nature, weight, measure, or volume of the contents except in certain cases which may be exempted.

Investigation of Miners' Diseases.

The trustees of the estate of the late Edward Wilson of Melbourne, who left a large sum for various charitable purposes, have endowed a fund for the investigation of miners' diseases. Dr. Summons has been appointed to conduct the inquiry and to facilitate his work he has also been given the station of an officer of the Board of Public Health. Dr. Summons has begun his investigations at Bendigo and the board of the Bendigo United Friendly Societies decided to give him every possible assistance.

Treatment of Inebriates.

It was mentioned in a previous communication that, although the buildings on an island in the Hawkesbury River, erected by the previous Government of New South Wales for inebriates, were completed, the present Government had not put them into use. The present Chief Secretary promised to inspect them but has not yet done so. Instead, he apparently contemplates turning them to other use and abandoning the scheme. The actual expenditure on these inebriates' homes has been £13,329 and experts regard them as eminently suitable. The main objection of the present Chief Secretary is that they are too inaccessible and that expense would be incurred in getting the patients to the homes! The very object in selecting the site was that patients would be isolated without being actually guarded or imprisoned. The matter is being well ventilated in the public press and public opinion is clearly against the Minister's proposal to abandon the scheme.

Hospital Affairs.

At a special meeting of the board of directors of the Sydney Hospital tenders were accepted for rebuilding the south wing of the institution at a cost of £18,995. The old structure was erected in 1857 and contained 67 beds. The new building will furnish 88 beds and will consist of a basement and four storeys. On the third storey accommodation is to be provided for resident medical officers. The roof will be flat, surrounded by a high railing, so as to be used as a solarium by patients.—The extension of accommodation at the Royal Prince Alfred Hospital, Sydney, by the erection of the "Albert" and "Victoria" pavilions, gives 220 more beds and has cost £75,000. The administrative block has also been remodelled at a cost of £7000 and a further sum of £5000 is being expended on the pathological department. In the rearrangement of the beds and wards provision is made for a lock ward of 20 beds, isolated in a wing of the old building. At this hospital a woman has for the first time been appointed on the resident medical staff. The question was raised last year and women were refused, but their advocates have finally gained the day and Miss Jessie Aspinall, M.B., Ch.B., has been appointed.—The committee of the Women's Hospital, Melbourne, has decided to alter the by-laws relating to the election of honorary medical officers. At every election every voter must vote for the full number of applicants required to fill the vacancies. The staff is to consist of 12 honorary medical officers, who shall hold office for seven years and must retire upon reaching the age of 60 years. In addition to the requirements of the Medical Act members of the staff must possess a degree in surgery and have been engaged in actual practice for not less than five years, but one year of practice in a hospital for diseases peculiar to women is to be considered as equal to two years' ordinary practice.

Commonwealth Dental Association.

A large meeting of dentists was held recently in Sydney, when it was decided to form a Commonwealth Dental Association. Its objects are to raise the standard of the dental profession within the Commonwealth, to institute a common dental law, to form a closer union by establishing branches in various States, and to provide a fund for the protection of members.

Action against a Surgeon for Burns by Hot Bottles.

A patient brought an action against Mr. Neville R. Howse of Orange, New South Wales, to recover £3000 compensation for injuries received owing, it was alleged, to the negligence of the defendant during the performance of an operation. The chief cause of complaint was that during the operation the plaintiff's limbs were severely burnt by hot water bottles. She also complained that her disease had been wrongly diagnosed as hydatids. Mr. Howse, who won the Victoria Cross in South Africa, pleaded

not guilty and that he had not the care and control of the hospital where the operation took place and was not responsible for the accidental burning. Mr. Howse stated that the plaintiff had a swelling which he diagnosed as a hydatid cyst and for which he operated at Miss Hart's private hospital. He had no interest whatever in Miss Hart's hospital and other medical men sent patients there. When the abdomen was opened the patient collapsed and appeared to be dead; efforts at resuscitation were made by two other medical men. He kept the wound covered with hot swabs. He did not know whether hot bottles were applied to the feet, but it was a proper thing to do and would be one of the nurses' duties. He did not apply any hot bottles himself. The swelling proved to be a solid tumour and not a hydatid. An hour after the operation he returned to the hospital and was then informed by the matron that the patient's feet had been burnt. When she left the hospital the burns had healed. The jury returned a verdict for the plaintiff for £50 and found specially, in answer to a question by the judge, that the hospital was not under the control or management of Mr. Howse but that he unintentionally allowed the plaintiff to remain under the impression that it was. They added, as a rider, that no reflection was cast upon the reputation of Mr. Howse, either professionally or otherwise. A stay of proceedings was granted.

Obituary.

Dr. John Frederick Sharpe Royle of Burrage, New South Wales, died very suddenly, from hæmoptysis, while on a visit to Sydney, on Jan. 2nd. He was educated at St. Bartholomew's Hospital, London, and the University of Aberdeen, where he graduated as M.B., C.M. in 1881. After practising in Worcester, England, he came to New South Wales in 1899. His wife and three children are in England.

Jan. 15th.

Obituary.

FRANCIS JOHN CRANE PARSONS, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A., J.P.

Mr. F. J. C. Parsons died at his residence, Friarn Lodge, Bridgwater, on Feb. 10th, in his fifty-ninth year. Mr. Parsons studied medicine at King's College, London, and was admitted L.S.A. in 1870, taking the further diplomas of L.R.C.P. Lond. and M.R.C.S. Eng. in 1871. He had been for many years in practice at Bridgwater, where he was highly respected. He was senior surgeon to the Bridgwater Infirmary and took a great interest in that institution, and it was mainly to his efforts that recently the fees paid by the in-patients had been abolished. Mr. Parsons had been for many years medical officer of health of the Bridgwater urban, rural, and port sanitary districts. He was on the Commission of the Peace for Bridgwater. He had been for many years churchwarden of the parish church, in which, through his liberality, a handsome oak screen was recently erected. Until a few years ago he played cricket regularly for the Bridgwater team. Much sympathy is felt in Bridgwater with his widow. At the funeral, which took place on Feb. 13th, there was a large attendance, including the mayor and corporation.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. W. Mayer, *privat-docent* of pharmacognosis in the University of Tübingen.—Dr. Schnée, one of the official physicians of the Carlsbad baths.—Dr. Victor A. Vorobieff, *privat-docent* of pathological anatomy in the University of Moscow.—Dr. Louis Wecker, the eminent Paris ophthalmologist. He was an Austrian by birth but studied medicine in Würzburg and Paris. He was 74 years of age.—Dr. Swan M. Burnett, professor of ophthalmology in the Georgetown University School of Medicine, Washington.—Dr. N. Kotovshchikoff, formerly professor of therapeutics in the University of Kazan.

POLITICAL DISORDER AMONG RUSSIAN MEDICAL MEN.—It is stated in the *Novoe Vremya* that the rural medical men of the district of Moscow have given notice that they will not remain at their posts after March 14th.

Medical News.

UNIVERSITY OF LONDON.—At the Preliminary Scientific Examination for internal and external students held in January the following candidates were successful:—

Inorganic Chemistry, Experimental Physics, and Biology.—Frederick Jasper Anderson, St. Bartholomew's Hospital and South African College, Cape Town; Edwin Augustus Attenborough and Benjamin Bernstein, London Hospital; Gopal Vinayak Deshmukh, Grant Medical College, Bombay, and London Hospital; Charles Douglas Kerr, Plymouth Technical Schools and St. Bartholomew's Hospital; Norman Claudius Lake, Plymouth Technical Schools; Mendel Mayers, London Hospital; Patrick John Monaghan, Guy's Hospital; William Marshall Oakden, Retford Grammar School and Nottingham High School; David Hubert Miles Silvanus and Philip Smith, Guy's Hospital; Elliott John Storer, St. Bartholomew's Hospital; Graham Yalden Thomson, Guy's Hospital; and Daniel Howard Wood, University College and Guy's Hospital.

Inorganic Chemistry and Experimental Physics.—Cyril Carlyle Beatty, Armstrong College of Science; *Phirozshaw C. Bharucha, University Tutorial College; Irene Nancy Clough, London (Royal Free Hospital) School of Medicine for Women; *James Fairbank Cocker, Victoria University; *William Henry Dupré, University Tutorial College; *Eric Alfred Charles Fazan, Epsom College and Middlesex Hospital; *Frances Jane Preston, University Tutorial College; and *Edward Leslie Horsburgh, Victoria University.

Inorganic Chemistry and Biology.—†Francis Cooke Alton, Plymouth Technical Schools; †John Adamson Edmond, Guy's Hospital; †Katherine Anne Gill, London (Royal Free Hospital) School of Medicine for Women; †Gordon Victor Hobbs, St. Mary's Hospital; John Grimson Moseley, London Hospital; †Maitland Radford, University College; and †James Lennox Stewart, Guy's Hospital.

Experimental Physics and Biology.—‡Edward Spencer Calthrop, Charing Cross Hospital; Geoffrey Marshall, St. Paul's School; Victor Ewings Negus, King's College; ‡Edward Hesketh Roberts, University College; and Ernest Gerald Stanley, St. Bartholomew's Hospital.

Inorganic Chemistry only.—*†George S. Applegate, University College, Bristol; *†Kathleen J. Armstrong, London (Royal Free Hospital) School of Medicine for Women; *†Henry Park Ashe, King's College; *†Cyril Banks, University of Sheffield; *†Kenneth C. Bomford, St. Bartholomew's Hospital; *†K. James Charles Bradshaw, University of Liverpool; †Edward George Huxley Cowen, Epsom College, Charing Cross Hospital, Birkbeck College, and private study; *†Robert Noel Farrer, University of Leeds; *†Walter Egbert Fox, Guy's Hospital; *†George Herbert Garlick, Epsom College and St. Mary's Hospital; *†Charles Gibson, London Hospital and Epsom College; *†Charles D'Oyly Grange, University of Leeds; *†Mary Frances Lucas, London (Royal Free Hospital) School of Medicine for Women; *†Maurice Charles Mason, St. Mary's Hospital; *†Guy Matthews, King's College; *†James Menzies, St. Mary's Hospital; *†Gerald Thomas Mullally, Guy's Hospital; *†George E. Eyre Nicholls, Victoria University; *Ambrose Owen, University College, Cardiff; *†William James Aitken Quine, Victoria University; *†Thomas Conrad Reeves, London Hospital; *†Cecil George Richardson, Westminster Hospital and King's College; *†Richard Alun Rowlands, University College, Bangor; *†William Faulkner V. Simpson, London Hospital; *†Ernest N. Snowden, St. Bartholomew's Hospital; *†Robert Stout, Guy's Hospital; *†Charles Stanley Turner, Middlesex Hospital; and *Bernard Thomas Verver, Guy's Hospital.

Experimental Physics only.—*‡John Wroth Adams, St. Bartholomew's Hospital; *Edward Alfred Barker, Guy's Hospital and University College, Bristol; Eric Crosby T. Clouston, University College and London Hospital; John Henry Cobb, University of Sheffield; *Wilfred Montague Glenister, St. Bartholomew's Hospital; Cyril George Hewett, University College; *‡Charles Edward B. Milner and Harold Arundel Moody, King's College; *Hugh Rimington, St. Bartholomew's Hospital; and *‡Agnes Priscilla Taylor, Girton College, Cambridge, and London (Royal Free Hospital) School of Medicine for Women.

Biology only.—‡¦Claude Alexander Birts, University College; Richard Frank Bolt, University College, Bristol; §†Winifred F. Buckley, Newnham College, Cambridge, and London (Royal Free Hospital) School of Medicine for Women; †Noel Hawley M. Burke, King's College; †Alfred Bernard Clark, University of Sheffield; Thomas Peters Edwards, St. Bartholomew's Hospital; ‡¦Alice Mary Ley Greaves, London (Royal Free Hospital) School of Medicine for Women; ‡¦Harrie M. Hood-Barrs, London (Royal Free Hospital) School of Medicine for Women; ‡¦Peregrine S. B. Langton, Middlesex Hospital; †Bernard Rayne Parmiter, University College, Nottingham; Camilo Antonio Prada, St. Bartholomew's Hospital; ‡¦H. Martin Rashbrook, Plymouth Technical Schools and private study; Louis Bruce Stringer, Guy's Hospital; †Ernest Alfred Tozer, London Hospital; Honoria Josephine Wallace, University Tutorial College; ‡¦Ernest White, St. Bartholomew's Hospital; ‡¦William Stanley Wildman, London Hospital; Samuel Wilson, Guy's Hospital; William Bernard Wilton, St. Bartholomew's Hospital; and John Eric Wood, Hartley University College.

* These candidates have already passed in biology.

† These candidates have already passed in experimental physics.

‡ These candidates have already passed in inorganic chemistry.

§ These candidates have already passed in inorganic and organic chemistry.

Organic Chemistry.—W. Reginald Ward Asplen, Westminster Hospital and King's College; John Lee Atkinson, Guy's Hospital; William Arthur Berry, Birkbeck College and private study; Bertie Blackwood, University of Leeds; Christopher Francis Sayles Broom, King's College; Barbara Broster, London (Royal Free Hospital) School of Medicine for Women; Sydney James Clegg, Victoria University and private tuition; Guy Barton Cockrem, Guy's Hospital; Ethel Mary Connan, London (Royal

For the week ending Jan. 20th there were 3938 deaths, as against 4278 a fortnight previously. The figures for the past week are: United Provinces, 1076 deaths; Bengal, 1056; Bombay Presidency, 661; Punjab, 519; Central Provinces, 338; Burma, 119; Mysore, 102; Madras, 47; Hyderabad, 33; Central India, 14; Kashmir, 14; and Rajputana, 4. The comparative immunity of Europeans continues a noticeable feature of the plague epidemic. In the Bombay Presidency, where a quarter of a million of people died from plague in 1905, only 19 Europeans were attacked, of whom ten died; and in 1904, when 316,000 deaths occurred from plague, only eight were amongst Europeans.

Feb. 2nd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Bubonic Plague.

Two cases of bubonic plague have been reported from Western Australia. One was a fireman on board the *Nera*. The ship's surgeon denied that the case was one of plague and said that the health officers in Sydney and Melbourne who examined the man agreed that the bubo was the result of a strain. The health officers at Fremantle, however, declared the case to be plague and quarantined the vessel and passengers. Another case occurred in a lad, aged 14 years, working in Perth, in the area in which plague last occurred. The case is severe. Six "contacts" were quarantined.

New Milk and Dairy Supervision Act, Victoria.

It is claimed that the new Milk and Dairy Supervision Act, which has just come into force after a prolonged debate and much amendment in the Parliament of Victoria, is a great advance on any legislation on the subject. Its chief object is to bring technical knowledge to the very door of the dairy farmer by means of the supervisors appointed under the Act. These men can only be appointed after having passed a written and practical examination and after producing evidence that they have had practical experience in dairying. They are required to become acquainted personally with every dairy farmer in the district; to have a personal knowledge of the conditions under which the business is conducted; to confer and to advise with the owners on all matters connected with farm animals, premises, utensils, and dairy produce; and to inspect these at dairies, factories, or milk stores, or in transit. In connexion with the supervision of cows the supervisor may prohibit the use of milk from any cow the milk of which he may consider is likely to prove injurious to health and he may put a temporary brand upon such cow. The Minister or the council, as the case may be, will then decide whether the branding is to be made permanent or not. Buildings are required to be erected on dairy farms to comply with the provisions of the Act and the cost of alterations is divided between the landlord and tenant in proportion to the length of time the lease has to run. The Minister can make advances to farmers to the extent of £20 on condition that the money is expended on the better construction and drainage of the farmstead.

Pure Food Act, Victoria.

Another measure passed at the end of the last session of the Victorian Parliament was the Pure Food Act. An outline of its main provisions has been previously given in these columns, but, like the Milk Bill, it was considerably modified in its various stages through Parliament. Under the Act an article will be deemed adulterated when it contains or is mixed or diluted with any substance in any quantity to the prejudice of the purchaser, or any preparation which diminishes its food value or nutritive properties, or when it contains or is mixed or diluted with any substance of lower commercial value than itself; or when it does not comply with any standard for such article which may be set out by regulation; or when it contains any prohibited substance. An article will be deemed to be misdescribed when it bears on the package any false or incorrect label purporting to indicate the nature, purity, or strength. It is obligatory to mark on packages containing articles of food the nature, weight, measure, or volume of the contents except in certain cases which may be exempted.

Investigation of Miners' Diseases.

The trustees of the estate of the late Edward Wilson of Melbourne, who left a large sum for various charitable purposes, have endowed a fund for the investigation of miners' diseases. Dr. Summons has been appointed to conduct the inquiry and to facilitate his work he has also been given the station of an officer of the Board of Public Health. Dr. Summons has begun his investigations at Bendigo and the board of the Bendigo United Friendly Societies decided to give him every possible assistance.

Treatment of Inebriates.

It was mentioned in a previous communication that, although the buildings on an island in the Hawkesbury River, erected by the previous Government of New South Wales for inebriates, were completed, the present Government had not put them into use. The present Chief Secretary promised to inspect them but has not yet done so. Instead, he apparently contemplates turning them to other use and abandoning the scheme. The actual expenditure on these inebriates' homes has been £13,329 and experts regard them as eminently suitable. The main objection of the present Chief Secretary is that they are too inaccessible and that expense would be incurred in getting the patients to the homes! The very object in selecting the site was that patients would be isolated without being actually guarded or imprisoned. The matter is being well ventilated in the public press and public opinion is clearly against the Minister's proposal to abandon the scheme.

Hospital Affairs.

At a special meeting of the board of directors of the Sydney Hospital tenders were accepted for rebuilding the south wing of the institution at a cost of £18,995. The old structure was erected in 1857 and contained 67 beds. The new building will furnish 88 beds and will consist of a basement and four storeys. On the third storey accommodation is to be provided for resident medical officers. The roof will be flat, surrounded by a high railing, so as to be used as a solarium by patients.—The extension of accommodation at the Royal Prince Alfred Hospital, Sydney, by the erection of the "Albert" and "Victoria" pavilions, gives 220 more beds and has cost £75,000. The administrative block has also been remodelled at a cost of £7000 and a further sum of £5000 is being expended on the pathological department. In the rearrangement of the beds and wards provision is made for a lock ward of 20 beds, isolated in a wing of the old building. At this hospital a woman has for the first time been appointed on the resident medical staff. The question was raised last year and women were refused, but their advocates have finally gained the day and Miss Jessie Aspinall, M.B., Ch.B., has been appointed.—The committee of the Women's Hospital, Melbourne, has decided to alter the by-laws relating to the election of honorary medical officers. At every election every voter must vote for the full number of applicants required to fill the vacancies. The staff is to consist of 12 honorary medical officers, who shall hold office for seven years and must retire upon reaching the age of 60 years. In addition to the requirements of the Medical Act members of the staff must possess a degree in surgery and have been engaged in actual practice for not less than five years, but one year of practice in a hospital for diseases peculiar to women is to be considered as equal to two years' ordinary practice.

Commonwealth Dental Association.

A large meeting of dentists was held recently in Sydney, when it was decided to form a Commonwealth Dental Association. Its objects are to raise the standard of the dental profession within the Commonwealth, to institute a common dental law, to form a closer union by establishing branches in various States, and to provide a fund for the protection of members.

Action against a Surgeon for Burns by Hot Bottles.

A patient brought an action against Mr. Neville R. Howse of Orange, New South Wales, to recover £3000 compensation for injuries received owing, it was alleged, to the negligence of the defendant during the performance of an operation. The chief cause of complaint was that during the operation the plaintiff's limbs were severely burnt by hot water bottles. She also complained that her disease had been wrongly diagnosed as hydatids. Mr. Howse, who won the Victoria Cross in South Africa, pleaded

not guilty and that he had not the care and control of the hospital where the operation took place and was not responsible for the accidental burning. Mr. Howse stated that the plaintiff had a swelling which he diagnosed as a hydatid cyst and for which he operated at Miss Hart's private hospital. He had no interest whatever in Miss Hart's hospital and other medical men sent patients there. When the abdomen was opened the patient collapsed and appeared to be dead; efforts at resuscitation were made by two other medical men. He kept the wound covered with hot swabs. He did not know whether hot bottles were applied to the feet, but it was a proper thing to do and would be one of the nurses' duties. He did not apply any hot bottles himself. The swelling proved to be a solid tumour and not a hydatid. An hour after the operation he returned to the hospital and was then informed by the matron that the patient's feet had been burnt. When she left the hospital the burns had healed. The jury returned a verdict for the plaintiff for £50 and found specially, in answer to a question by the judge, that the hospital was not under the control or management of Mr. Howse but that he unintentionally allowed the plaintiff to remain under the impression that it was. They added, as a rider, that no reflection was cast upon the reputation of Mr. Howse, either professionally or otherwise. A stay of proceedings was granted.

Obituary.

Dr. John Frederick Sharpe Royle of Burrage, New South Wales, died very suddenly, from hæmoptysis, while on a visit to Sydney, on Jan. 2nd. He was educated at St. Bartholomew's Hospital, London, and the University of Aberdeen, where he graduated as M.B., C.M. in 1881. After practising in Worcester, England, he came to New South Wales in 1899. His wife and three children are in England.

Jan. 15th.

Obituary.

FRANCIS JOHN CRANE PARSONS, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A., J.P.

Mr. F. J. C. Parsons died at his residence, Friarn Lodge, Bridgwater, on Feb. 10th, in his fifty-ninth year. Mr. Parsons studied medicine at King's College, London, and was admitted L.S.A. in 1870, taking the further diplomas of L.R.C.P. Lond. and M.R.C.S. Eng. in 1871. He had been for many years in practice at Bridgwater, where he was highly respected. He was senior surgeon to the Bridgwater Infirmary and took a great interest in that institution, and it was mainly to his efforts that recently the fees paid by the in-patients had been abolished. Mr. Parsons had been for many years medical officer of health of the Bridgwater urban, rural, and port sanitary districts. He was on the Commission of the Peace for Bridgwater. He had been for many years churchwarden of the parish church, in which, through his liberality, a handsome oak screen was recently erected. Until a few years ago he played cricket regularly for the Bridgwater team. Much sympathy is felt in Bridgwater with his widow. At the funeral, which took place on Feb. 13th, there was a large attendance, including the mayor and corporation.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. W. Mayer, *privat-docent* of pharmacognosis in the University of Tübingen.—Dr. Schnée, one of the official physicians of the Carlsbad baths.—Dr. Victor A. Vorobieff, *privat-docent* of pathological anatomy in the University of Moscow.—Dr. Louis Wecker, the eminent Paris ophthalmologist. He was an Austrian by birth but studied medicine in Würzburg and Paris. He was 74 years of age.—Dr. Swan M. Burnett, professor of ophthalmology in the Georgetown University School of Medicine, Washington.—Dr. N. Kotovshchikoff, formerly professor of therapeutics in the University of Kazan.

POLITICAL DISORDER AMONG RUSSIAN MEDICAL MEN.—It is stated in the *Novoe Vremya* that the rural medical men of the district of Moscow have given notice that they will not remain at their posts after March 14th.

Medical News.

UNIVERSITY OF LONDON.—At the Preliminary Scientific Examination for internal and external students held in January the following candidates were successful:—

Inorganic Chemistry, Experimental Physics, and Biology.—Frederick Jasper Anderson, St. Bartholomew's Hospital and South African College, Cape Town; Edwin Augustus Attenborough and Benjamin Bernstein, London Hospital; Gopal Vinayak Deshmukh, Grant Medical College, Bombay, and London Hospital; Charles Douglas Kerr, Plymouth Technical Schools and St. Bartholomew's Hospital; Norman Claudius Lake, Plymouth Technical Schools; Mendel Mayers, London Hospital; Patrick John Monaghan, Guy's Hospital; William Marshall Oakden, Retford Grammar School and Nottingham High School; David Hubert Miles Silvanus and Philip Smith, Guy's Hospital; Elliott John Storer, St. Bartholomew's Hospital; Graham Yalden Thomson, Guy's Hospital; and Daniel Howard Wood, University College and Guy's Hospital.

Inorganic Chemistry and Experimental Physics.—Cyril Carlyle Beatty, Armstrong College of Science; *Phirozshaw C. Bharucha, University Tutorial College; Irene Nancy Clough, London (Royal Free Hospital) School of Medicine for Women; *James Fairbank Cocker, Victoria University; *William Henry Dupré, University Tutorial College; *Eric Alfred Charles Fazan, Epsom College and Middlesex Hospital; *Frances Jane Preston, University Tutorial College; and *Edward Leslie Horsburgh, Victoria University.

Inorganic Chemistry and Biology.—†Francis Cooke Alton, Plymouth Technical Schools; †John Adamson Edmond, Guy's Hospital; †Katherine Anne Gill, London (Royal Free Hospital) School of Medicine for Women; †Gordon Victor Hobbs, St. Mary's Hospital; John Grimson Moseley, London Hospital; †Maitland Radford, University College; and †James Lennox Stewart, Guy's Hospital.

Experimental Physics and Biology.—‡Edward Spencer Calthrop, Charing Cross Hospital; Geoffrey Marshall, St. Paul's School; Victor Ewings Negus, King's College; ‡Edward Hesketh Roberts, University College; and Ernest Gerald Stanley, St. Bartholomew's Hospital.

Inorganic Chemistry only.—*†George S. Applegate, University College, Bristol; *†Kathleen J. Armstrong, London (Royal Free Hospital) School of Medicine for Women; *†Henry Park Ashe, King's College; *†Cyril Banks, University of Sheffield; *†Kenneth C. Bomford, St. Bartholomew's Hospital; *†K. James Charles Bradshaw, University of Liverpool; †Edward George Huxley Cowen, Epsom College, Charing Cross Hospital, Birkbeck College, and private study; *†Robert Noel Farrer, University of Leeds; *†Walter Egbert Fox, Guy's Hospital; *†George Herbert Garlick, Epsom College and St. Mary's Hospital; *†Charles Gibson, London Hospital and Epsom College; *†Charles D'Oyly Grange, University of Leeds; *†Mary Frances Lucas, London (Royal Free Hospital) School of Medicine for Women; *†Maurice Charles Mason, St. Mary's Hospital; *†Guy Matthews, King's College; *†James Menzies, St. Mary's Hospital; *†Gerald Thomas Mullally, Guy's Hospital; *†George E. Eyre Nicholls, Victoria University; *Ambrose Owen, University College, Cardiff; *†William James Aitken Quine, Victoria University; *†Thomas Conrad Reeves, London Hospital; *†Cecil George Richardson, Westminster Hospital and King's College; *†Richard Alun Rowlands, University College, Bangor; *†William Faulkner V. Simpson, London Hospital; *†Ernest N. Snowden, St. Bartholomew's Hospital; *†Robert Stout, Guy's Hospital; *†Charles Stanley Turner, Middlesex Hospital; and *Bernard Thomas Verver, Guy's Hospital.

Experimental Physics only.—*‡John Wroth Adams, St. Bartholomew's Hospital; *Edward Alfred Barker, Guy's Hospital and University College, Bristol; Eric Crosby T. Clouston, University College and London Hospital; John Henry Cobb, University of Sheffield; *Wilfred Montague Glenister, St. Bartholomew's Hospital; Cyril George Hewett, University College; *‡Charles Edward H. Milner and Harold Arundel Moody, King's College; *Hugh Rimington, St. Bartholomew's Hospital; and *‡Agnes Priscilla Taylor, Girton College, Cambridge, and London (Royal Free Hospital) School of Medicine for Women.

Biology only.—†‡Claude Alexander Birts, University College; Richard Frank Bolt, University College, Bristol; †‡Winifred F. Buckley, Newnham College, Cambridge, and London (Royal Free Hospital) School of Medicine for Women; †Noel Hawley M. Burke, King's College; †Alfred Bernard Clark, University of Sheffield; Thomas Peters Edwards, St. Bartholomew's Hospital; †‡Alice Mary Ley Greaves, London (Royal Free Hospital) School of Medicine for Women; †‡Harrie M. Hood-Barrs, London (Royal Free Hospital) School of Medicine for Women; †‡Peregrine S. B. Langton, Middlesex Hospital; †Bernard Rayne Parmiter, University College, Nottingham; Camilo Antonio Prada, St. Bartholomew's Hospital; †‡H. Martin Rashbrook, Plymouth Technical Schools and private study; Louis Bruce Stringer, Guy's Hospital; †Ernest Alfred Tozer, London Hospital; Honoria Josephine Wallace, University Tutorial College; †‡Ernest White, St. Bartholomew's Hospital; †‡William Stanley Wildman, London Hospital; Samuel Wilson, Guy's Hospital; William Bernard Wilson, St. Bartholomew's Hospital; and John Eric Wood, Hartley University College.

* These candidates have already passed in biology.
† These candidates have already passed in experimental physics.
‡ These candidates have already passed in inorganic chemistry.
§ These candidates have already passed in inorganic and organic chemistry.

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Free Hospital) School of Medicine for Women; Colin Harold Crump, Guy's Hospital; Gopal Vinayak Deshmukh, Grant Medical College, Bombay, and London Hospital; James Philip Elias, private study; Archibald Ferguson, Epsom College and St. Bartholomew's Hospital; Alfred John Gibson, St. Bartholomew's Hospital; Thomas Hare, St. Mary's Hospital; William Roberts Harris, St. George's Hospital; Reginald Simpson Harvey, University of Leeds; Reginald Melville Hiley, University College, Bristol; Frederick Whewell Hogarth, Guy's Hospital; Joseph Stanley Hopwood, St. Thomas's Hospital; Florence Ida G. Hunter, London (Royal Free Hospital) School of Medicine for Women; Roger Percival Jones, University College, Cardiff, and University College; Ernest Charles Lindsay, University of Otago, New Zealand, and London Hospital; George Gibson Lyttle, Queen's College and Municipal Technical Institute, Belfast; Gladys Muriel Macaskie, London (Royal Free Hospital) School of Medicine for Women; Douglas Ashley Mitchell, Guy's Hospital; Raymond Montgomery, University of Leeds; Arthur Eustace Morgan, University College, Bristol, and private tuition; Thaddeus T. O'Callaghan, Guy's Hospital; Alexander Croydon Palmer, University of Otago, New Zealand, and London Hospital; Thomas Conrad Reeves, London Hospital; David Scurlock, St. Mary's Hospital; William Faulkner V. Simpson, London Hospital; William Rees Thomas, University College, Cardiff; Cyril Underwood Whitney, King's College; Gerald Whittington, Charing Cross Hospital and private study; Violet Katherine Maria Wilde, London (Royal Free Hospital) School of Medicine for Women; Charles Witts, Guy's Hospital; and Stanley Wyard, University College, Cardiff.

UNIVERSITY OF CAMBRIDGE.—At the Congregation on Feb. 15th the following degrees were conferred:—

M.B.—J. N. F. Fergusson, St. John's.
B.C.—H. B. Owen, Gonville and Caius.

UNIVERSITY OF OXFORD.—Scholarships in Natural Science are announced for competition as follows:—March 13th, Keble College; April 24th, Merton College, New College, and Corpus Christi College; and June 26th, Brasenose College.—In a Congregation held on Feb. 15th the degrees of B.M., B.Ch., were conferred upon C. J. Pinching of St. John's College.

DEATH OF A CENTENARIAN.—The *Times* of Feb. 17th states that the oldest inhabitant of Colchester, Mr. Joseph Jennings, has just died in an almshouse there at the age of 100 years. It was a disputed will in his family which led to the lawsuit on which Dickens founded the case of "Jarndyce *v.* Jarndyce" in "Bleak House."

THE ABERYSTWYTH WORKHOUSE MEDICAL OFFICERSHIP.—Nearly four months have elapsed since Mr. G. R. E. Bonsall, medical officer of the Aberystwyth workhouse, resigned his post. The circumstances in which Mr. Bonsall resigned are interesting. He was paid the small salary of £30, out of which he had to find medicine for a house holding on an average 40 inmates. The officers in the outside districts had been treated more generously and this and other matters prompted Mr. Bonsall to ask for an advance. His application was refused and he resigned the office of medical officer for the workhouse but retained those for the outside district as well as that of vaccination officer. The majority of the guardians were angry at his decision and called upon him to resign the offices. He refused and his action was endorsed by the Local Government Board. As a matter of fact the offices are separate and distinct and it is on these grounds that Mr. Bonsall has declined to accede to the request of the guardians to hand in his resignation. The other medical men in the town had some years ago come to an arrangement whereby they agreed not to apply in opposition to Mr. Bonsall when he sought an increased salary—all but one, and he a newcomer; this gentleman agreed to do the work while the dispute was pending for £1 a week. Mr. Bonsall would willingly have done the work for the same sum but it was clear that the majority of the guardians, who are opposed both in politics and religion to him, would not have him and excused their conduct by saying that they could not get on together and that he could not speak Welsh (he had served 15 years previously without any complaint). The new arrangement was reported to the British Medical Association, which took the matter up, and after a short period had elapsed the newcomer resigned the post at the workhouse. Baffled in this quarter the house committee sought the board of managers of the infirmary and at the meeting of the board on Thursday, last week, permission was given for the house surgeon to attend the workhouse (both places are within a quarter of a mile of each other) when requested by the master in cases of emergency. In the meantime Mr. F. T. Bircham, an inspector under the Local Government Board, had visited the workhouse and had made an entry that the vacancy must be filled. This was the position of matters when the case came before the board on Monday. A letter was read from a surgeon at Brecon who, apparently unaware of the real facts, wrote to ask whether there was a vacancy. Captain Roberts opened the discussion by charging the board with neglecting the patients because there was no general supervision of the inmates. There was one patient in particular who was very ill and this man had been without medicine for five days. He considered that the onus of all this suffering rested upon the shoulders of the majority of the board. A heated discussion followed. At length it was proposed to ask the infirmary board to continue the services of the house surgeon until the dispute was settled. As an amendment Captain Roberts proposed that they should advertise to fill the vacancy. This was put but was defeated by 13 to 9. The proposition was then put and carried. Afterwards Mr. W. Thomas moved that the Local Government Board should be interviewed in order to secure a settlement of the dispute and Captain Roberts said that he would second this because it was an admission that the present arrangements were not satisfactory.

KING EDWARD'S SANATORIUM AT MIDHURST.—The furniture for use at the King's Sanatorium is now on view at the premises of Messrs. Heal and Sons, Tottenham Court-road, London, whose designs have been selected by the advisory committee of the sanatorium. The furniture for the patients is made of polished birch while that for the nurses' rooms is of polished pine, and the articles for both patients and nurses are simple in construction and pleasing to the eye, though there is an absence of unnecessary, and in the circumstances perilous, ornamentation. The patients' wardrobes are polished both inside and outside and have convex tops to prevent lodgment of dust and to facilitate cleaning. All the interior angles of these wardrobes are rounded. All shelves, the tops of washstands, bedside cupboards, and so on are of plate glass, and all the furniture is raised well up from the floor to allow of easy dusting beneath it. A simple and ingeniously constructed soiled linen bag is provided which can be sent directly to the laundry, all repacking being obviated. The bedsteads, on large leather tyred wheels, have a specially devised mattress which is not liable to sag and protruding castings are avoided where possible. They are highly finished in green enamel and rubber-shod buffers at the head prevent them from damaging the walls of the bedroom and can be used as handles for the purpose of moving the bed from one place to another.

THE METROPOLITAN ASYLUMS BOARD AND THE TREATMENT OF CONSUMPTION.—At a meeting of the Metropolitan Asylums Board on Feb. 17th the general purposes committee submitted a report on the proposal to establish sanatoriums for consumptives in the metropolis. The committee stated that it had considered a memorial which the managers had received from the metropolitan branch of the Incorporated Society of Medical Officers of Health in which the Board was urged to provide hospital accommodation for the treatment and isolation of patients suffering from pulmonary tuberculosis. In this memorial it was proposed:—

(*a*) That an Order of the Local Government Board be obtained to make Section 5 of the Metropolitan Poor Act, 1867, applicable to the case of "poor persons" suffering from pulmonary phthisis (consumption); and, if necessary,

(*b*) That an Act be obtained to make the provisions of Section 80 of the Public Health (London) Act, 1891, applicable to pulmonary phthisis (consumption) as if such disease were therein mentioned as well as "fever, or small-pox, or diphtheria."

With the object of ascertaining, in the first instance, the views of the Local Government Board, of the several metropolitan, city, and borough councils, boards of guardians, and sick asylum districts, and of the administrative bodies of the hospitals for consumption at Brompton and Victoria Park and in the City-road, upon the subject, the committee gave directions that the boards of guardians should also be asked to inform the managers what steps, if any, they had taken to deal with tuberculous cases in their infirmaries and with what results. The Local Government Board had since replied in a letter dated June 27th, 1905, to the effect that whilst they were then "obtaining information on the whole subject," they were not "in a position to express an opinion on the question as to whether the managers should undertake the new duties suggested." The replies which were received from the other authorities enumerated above showed that of the 65 authorities consulted 19 were wholly favourable to the prayer of the

memorial, nine were favourable if the cost were made a national charge, and 14 were unfavourable, whilst the replies of the remaining 23 authorities were more or less indefinite. In the absence of any authoritative expression of opinion by the Local Government Board and as a result of its consideration of the question in all its bearings the committee recommended :—

(1) That the managers do forward to the Local Government Board a copy of the memorials addressed to the managers (*a*) by the Metropolitan Branch of the Incorporated Society of Medical Officers of Health on the 15th April, 1905; and (*b*) by Sir William Broadbent, Bart., K.C.V.O., M.D., F.R.S., on the 4th November last, on the subject of the provision of hospital accommodation for the treatment and isolation of patients suffering from pulmonary phthisis.

(2) That the Local Government Board be further informed that, having regard to the uncertainty which prevails as to the probable number of patients who would come under the schemes referred to in the memorials and to the great prospective cost to the ratepayers of the metropolis, the managers will be glad to receive the judgment of the Local Government Board upon the prayer of the memorials referred to.

The recommendations were agreed to and the report was adopted without discussion.

SOCIETY OF ARTS.—At an ordinary meeting of the Society of Arts held on Jan. 31st Mr. Thomas Adams read a paper on the Garden City and the Cheap Cottage. He said that in Great Britain the evils of overcrowding in towns and depopulation in rural districts have reached an acute stage. According to the census returns for England and Wales the urban population is 77 per cent. of the whole, whereas 50 years ago it was only just over 50 per cent. Moreover, the system of warehousing people in tenement dwellings, while it might be in some cases a necessary evil, was deleterious to their health. In the metropolitan borough of Finsbury, where the population of one-roomed tenements was 14,516, the death-rate per 1000 among them in 1903 was 38·9, whereas the rate for the whole borough was 19·6. As the proportion of people living in overcrowded tenements increased, so did the infant death-rate, going up from 160 to 210 and 223 per 1000. The remedy for this state of things was not to destroy the towns but to remodel them. Town industries must be spread over wider areas and means must be found to bring manufacture and agriculture into closer contact. In the central area of London the number of persons per acre is 148, in the county of London it is 54, and in "Extra London" it is 2·5, while in Westmorland there is one person to every eight acres. The inhabitants of the overcrowded central districts would not be financially benefited by improving the means of travelling to and from the suburbs, because when the cost of travelling was added to the rent of the suburban cottage there would be no appreciable economy. Remedial measures for these various evils were suggested in a book entitled "To-Morrow," published in 1898 by Mr. Ebenezer Howard, and a society called the Garden City Association was formed in 1899 with a view to the realisation of this teaching. Some of the essential principles underlying Mr. Howard's scheme were (1) the purchase of a large agricultural estate with the object of establishing a residential and industrial town; (2) the provision of a belt of agricultural land round the town under such restricted covenants as would secure to the inhabitants the enjoyment for all time of the combined advantages of town and country life; and (3) the retention of a large amount of open space for recreative purposes and for the allowance of a fair-sized garden to each house. As a result of this propaganda the Garden City Pioneer Company was formed in 1902 with a capital of £20,000, and a year later a company called the First Garden City, Limited, was formed with a capital of £300,000, to purchase and develop the Letchworth estate of 3800 acres, lying in the extreme north of Hertfordshire, one and a half miles from Hitchin Junction on the main line of the Great Northern Railway. The land was acquired at the average price of about £40 per acre. The area occupied by the town is about 1300 acres, including 100 acres of parks and open spaces, and the agricultural belt comprises about 2500 acres. Provision is made in the town area for a population of about 30,000 persons, or about 35,000 inclusive of the villages and the population engaged in agricultural pursuits. The density of the population will average about 23 per acre on the town area and 9 per acre over the whole estate. About 300 new houses are erected or in course of erection and about 200 of these are already occupied. Cottages are not provided with less than four rooms and few with less than five rooms. An exhibition of cheap cottages which was held at Letchworth last summer has had the practical result of proving that a cottage containing five rooms, including kitchen, scullery, and three bedrooms, the latter measuring not less than 2000 cubic feet, could be erected in most rural districts at a cost of from £150 to £160. Mr. Adams concluded with references to the garden cities or villages of Bournville, near Birmingham, Port Sunlight, in the North of England, and King's Weston Estate, near Bristol.

BLACKMAILING A MEDICAL MAN.—At the Bristol assizes, held on Feb. 16th, before Mr. Justice Bucknill, Frederick Cook, a butler, was sentenced to five years' penal servitude for attempting, in circumstances of peculiar atrocity, to levy blackmail on Dr. Reginald Esger of Northwoods, near Bristol.

HEALTH OF BATH.—At the meeting of the Bath sanitary committee held on Jan. 29th the medical officer of health (Dr. W. H. Symons) reported that during 1905 there were 985 births and 808 deaths registered in Bath. Estimating the population at 50,000, the birth-rate corresponded to 19·7 per 1000 and the crude death-rate was 16·16 per 1000. The corrected death-rate was 13 per 1000, being the lowest rate recorded for Bath, except in the year 1903, when it was 12·3 per 1000.

THE INTERNATIONAL MEDICAL CONGRESS AT LISBON.—A pleasant way of attending the International Medical Congress has now been arranged by the Booth line. The inclusive cost, covering about 12 days' full hotel accommodation at Lisbon, has been fixed at £22 and we are informed that no pains will be spared to make the guests thoroughly comfortable. The out-going boat will leave Liverpool on April 9th and London on April 11th and will stop two days at Havre and two days at Oporto, enabling these places and their vicinity to be seen. Provision will be made for a 12 days' sojourn at the Hôtel d'Inglaterra at Lisbon. The return voyage will be made direct to Havre, where passengers can change vessels and cross to Southampton for London or can go on the Booth liner to Liverpool. The steamers chartered for the out and home voyages are of 4187 tons and 5442 tons register respectively and are, we are informed, modern passenger boats in every respect.

LITERARY INTELLIGENCE.—The new series of little books under the title of "Religions Ancient and Modern," crown 8vo, 1*s.* net per volume, which was recently announced by Messrs. A. Constable and Co., Limited, as in preparation, will lead off with four volumes to be published immediately—viz.: "Animism," by Edward Clodd, author of "The Story of Creation"; "Pantheism," by James Allenson Picton, author of "The Religion of the Universe"; "The Religions of Ancient China," by Professor Giles, LL.D., professor of Chinese in the University of Cambridge; and "The Religion of Ancient Greece," by Jane Harrison, lecturer at Newnham College, Cambridge, author of "Prolegomena to Study of Greek Religion." The first four volumes mentioned above will be followed at short intervals by others—namely: "Islam," by Professor T. W. Arnold; "Magic and Fetishism," by Dr. A. C. Haddon; and "The Religion of Ancient Egypt," by Professor W. M. Flinders Petrie.

LONDON SCHOOL OF CLINICAL MEDICINE.—The Norwood branch of the British Medical Association (South-Eastern division) held a clinical meeting at the London School of Clinical Medicine, the Dreadnought Hospital, Greenwich, on Feb. 15th, Sir Dyce Duckworth being in the chair. Over 100 members of the branch were present, including the president, Dr. H. Hetley; the honorary secretaries, Mr. H. J. Prangley and Mr. A. W. Soper; and Dr. Gooding, Mr. E. G. Annis, Dr. Burton, Dr. Purvis, and others. The majority of the members of the hospital and school staffs also attended and the committee of management was represented by Admiral Sir Richard Tracey, Dr. Rogers, and the secretary, Mr. P. Michelli. The members assembled in the lecture room of the school where they were welcomed by Sir Dyce Duckworth, who, in a few introductory remarks, sketched the history of the initiation of the school and emphasised the need for such an institution. Dr. Guthrie Rankin also addressed the meeting and expressed the hope that practitioners in the neighbourhood would lend their support to the scheme. After the transaction of the formal business the members were shown the pathological and clinical laboratories, the library, museum, &c., by Dr. C. C. Choyce, the medical superintendent, and then adjourned to the hospital, the wards of which were open for inspection.

Tea was served in the board-room and a number of interesting cases were exhibited in the clinical theatre and adjoining rooms of the out-patient department. The following cases were shown and demonstrated:—Sir Dyce Duckworth: A case of Aneurysm of the Aorta. Dr. Frederick Taylor: A remarkable case of Myoclonus involving the Cervical and Lumbar Muscles which had existed for 30 years. Dr. R. Tanner Hewlett: A case of Cerebro-spinal Syphilis with Double Optic Neuritis markedly benefited by treatment, and a case of Epilepsy developing after injury. Dr. Guthrie Rankin: Cases of Tabes Dorsalis and Disseminated Sclerosis, and a well-marked and typical case of Achondroplasia. Sir William H. Bennett: An interesting case of Sarcoma of the Quadriceps Extensor of the Thigh. Mr. A. W. Mayo Robson: A case of Cholelithiasis with recovery after operation, and a case of Gastric Carcinoma. Mr. William Turner: A case of Gumma of the Cervical Vertebræ. Mr. L. Vernon Cargill: Cases of Lead Deposit in the Cornea and Syphilitic Iritis. Mr. Malcolm Morris: A case of Lupus. Dr. StClair Thomson: Throat and Nose cases. Dr. S. Russell Wells: Cases of Adherent Pericardium and Aortic Disease. Dr. A. Ernest Jones: A case of Hereditary Spastic Diplegia in a boy. Mr. Burrows: A case of Pes Cavus. Mr. E. Rock Carling: A case of Morbus Coxæ Senilis. Dr. Wilfrid S. Fox: A Curious Specific Eruption on the Forehead. The London School of Clinical Medicine is now completely organised and in full working order, the affiliated hospitals being the Waterloo-road Hospital for Diseases of Women and Children, the York-road Lying-in Hospital, and the Bethlem Hospital for Mental Diseases. The next session will commence on May 1st.

BOOKS, ETC., RECEIVED.

APPLETON, SIDNEY, London.

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon. By James P. Tuttle, A.M., M.D., Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital, Visiting Surgeon to the Almshouse and Workhouse Hospitals. Second edition, revised. Price not stated.

Differential Diagnosis and Treatment of Disease. A Text-book for Practitioners and Advanced Students. By Augustus Caillé, M.D., Fellow of the New York Academy of Medicine, Member and ex-President of the American Pædiatric Society. Price 25s. net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.

A Practical Guide to the Administration of the "Nauheim" Treatment of Chronic Diseases of the Heart in England. By Leslie Thorne Thorne, M.D., B.S. Durham, M.R.C.S. Eng., L.R.C.P. Lond., Assistant Medical Examiner (Education), London County Council. Second edition. Price 3s. 6d. net.

Laboratory Manual of Physiology. By Frederick C. Busch, B.S., M.D., Professor of Physiology, Medical Department, University of Buffalo. Price 6s. net.

Gynæcological Diagnosis. A Manual for Students and Practitioners. By Arthur E. Giles, M.D., B.Sc. Lond., F.R.C.S. Ed., M.R.C.P. Lond., Gynæcologist to the Tottenham Hospital, Surgeon to Out-patients, Chelsea Hospital for Women. Price 7s. 6d. net.

CHURCHILL, J. AND A., 7, Great Marlborough-street, W.

Essentials of Surface Anatomy. By Chas. R. Whittaker, L.R.C.S., L.R.C.P., &c., Demonstrator of Anatomy, Surgeons' Hall, Edinburgh. Price 2s. 6d. net.

GREEN, WILLIAM, AND SONS, Edinburgh and London.

The Cleansing, Disinfection, and Protection of the Hands. An Experimental and Critical Study. By Dr. Carl S. Haegler, a.o. Professor of Surgery in the University of Basel, Switzerland. Translated with the special authority of the Author by Charles Heron Watson, M.A., M.B., F.R.C.S. Edin., Assistant Surgeon, Leith Hospital. Price 6s. net.

HARPER AND BROTHERS, London and New York.

Evolution the Master-Key. A Discussion of the Principle of Evolution as Illustrated in Atoms, Stars, Organic Species, Mind, Society, and Morals. By C. W. Saleeby, M.D. Edin., Author of "The Cycle of Life." Price not stated.

HEINEMANN, WILLIAM, London.

Sex and Character. By Otto Weininger. Authorised translation from the Sixth German Edition. Price 17s. net.

LAHIRI, S. K., AND Co., 54, College-street, Calcutta. (KEGAN PAUL, TRENCH, TRÜBNER, AND Co., London.)

Nutrition and Dysentery. By U. N. Mukerji, M.D. Edin., M.R.C.S. Eng., Lieutenant-Colonel, Indian Medical Service (retired). Price 3s. 6d. net.

LONGMANS, GREEN, AND Co., 39, Paternoster-row, E.C.

The Health of our Children in the Colonies. A Book for Mothers. By Dr. Lilian Austin Robinson. Price 2s. 6d. net.

MACMILLAN AND Co., LIMITED, London.

Chemistry of the Proteids. By Gustav Mann, M.D. Edin., B.Sc. Oxon., University Demonstrator of Physiology, Oxford. Based on Professor Otto Cohnheim's "Chemie der Eiweisskörper." Price 15s. net.

MURRAY, JOHN, Albemarle-street, W.

Chemistry of the Albumens. Ten Lectures delivered in the Michaelmas Term, 1904, in the Physiological Department of University College, London. By S. B. Schryver, D.Sc. Lond., Ph.D. Leipzig, Lecturer in Physiological Chemistry to University College, London. Published under the auspices of the University of London. Price 7s. 6d. net.

REBMAN, Limited, 129, Shaftesbury-avenue, W.C.

A Textbook of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By Arthur R. Cushny, M.A., M.D. Aberd., Professor of Pharmacology in the University College, London, Eng.; formerly Professor of Materia Medica and Therapeutics in the University of Michigan. Fourth edition, thoroughly revised. Price 17s. 6d. net.

Anæsthesia in Dental Surgery. By Thomas D. Luke, M.B., F.R.C.S. Edin., Lecturer on Anæsthetics, Edinburgh University. Second edition. Price 6s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BENTON, WILLIAM, M.R.C.S., L.R.C.P. Lond., L.S.A., D.P.H., has been appointed Deputy Medical Officer of Health of East Ham.

BOWER, W. C., M.R.C.S., L.R.C.P., has been appointed to the West African Medical Staff at Sierra Leone.

BURGESS, H. L., M.R.C.S., L.R.C.P., has been appointed to the West African Medical Staff in Southern Nigeria.

CALDWELL, T. C., M.B., Ch.B. Edin., D.P.H. Edin. & Glasg., has been appointed to the West African Medical Staff at Lagos.

CARLAW, H., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed to the West African Medical Staff on the Gold Coast.

COPE, R., M.R.C.S., L.R.C.P. Lond., has been appointed to the West African Medical Staff on the Gold Coast.

EDGEWORTH, FRANCIS HENRY, M.B., B.C. Cantab., D.Sc. Lond., has been appointed Honorary Physician to the Bristol Royal Infirmary.

FAYRER, Sir JOSEPH, Bart., M.D. Edin., F.R.C.P. Lond., F.R.C.S. Eng., LL.D Edin. & St. And., F.R.S., has been appointed Honorary Consulting Physician to the Falmouth Hospital.

GRAHAM, G. H., M.D. Durh., has been appointed Assistant Physician in charge of the Electrical Department at the Dreadnought Seamen's Hospital, Greenwich.

HISCOCK, R. C., M.D., C.M. Canada, L.R.C.P. & S. Edin., has been appointed to the West African Medical Staff at Lagos.

LATHAM, HENRY, M.B., C.M. Edin., has been appointed Assistant Physician to the Peterborough Infirmary.

MCDOUALL, J. C. S., M.R.C.S., L.R.C.P. Lond., has been appointed to the West African Medical Staff on the Gold Coast.

MOORE, J. J., L.R.C.P. & S. Irel., has been appointed to the West African Medical Staff at Sierra Leone.

NIXON, JOHN ALEXANDER, M.B. Cantab., has been appointed Assistant Physician to the Bristol Royal Infirmary.

PRICHARD, ARTHUR WILLIAM, M.R.C.S., L.S.A., has been appointed Honorary Consulting Surgeon to the Bristol Royal Infirmary.

RENDLE, A. R., M.R.C.S., L.R.C.P., has been appointed to the West African Medical Staff in Southern Nigeria.

ROBERTS, J. LLOYD, M.B., C.M. Edin., D.P.H., has been appointed an Examiner for the St. John Ambulance Association.

ROSSER, JOHN SAMUEL, M.D., C.M. Glasg., D.P.H. Glasg., has been appointed *pro tem.* Medical Officer of Health of Llandovery, Carmarthenshire.

RYAN, J. C., L.R.C.P. & S. Irel., has been appointed to the West African Medical Staff at Lagos.

STACK, EDWARD HUGH EDWARDS, M.B., B.C. Cantab., F.R.C.S., L.R.C.P., has been appointed Honorary Assistant Surgeon to the Bristol Royal Infirmary.

SWANN, A. J. T., M.B., C.M. Glasg., has been appointed to the West African Medical Staff in Northern Nigeria.

THOMSON, MAY, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., L.M. Dub., has been appointed Honorary Clinical Assistant to the Leeds Public Dispensary.

WALDO, HENRY, M.D., C.M. Aberd., M.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Physician to the Bristol Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIDGWATER HOSPITAL.—House Surgeon. Salary £80 a year, with board and residence.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—House Physician. Salary £65 per annum, with board, residence, and laundry. Also Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, and laundry.

CANCER HOSPITAL, Fulham-road, London, S.W.—Junior House Surgeon for six months. Salary £70 per annum, with board and residence.

DEVON COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £125, rising to £155, with board, residence, and laundry.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium £25, with board, residence, and laundry.

EVELINA HOSPITAL, Southwark Bridge-road, London, S.E.—Assistant House Surgeon for three months. Salary at rate of £70 per annum, with board, residence, and washing.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn circus, E.C.—Honorary Physician.
GROCERS' COMPANY'S SCHOLARSHIPS IN SANITARY SCIENCE.—Two each of £300 a year, tenable for one year but renewable.
HAMPSTEAD GENERAL HOSPITAL.—Resident Medical Officer foo six months, eligible for re-election. Salary £80 per annum, with board and residence.
HANDSWORTH URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary £250 per annum.
KING'S COLLEGE HOSPITAL.—Clinical Assistant in the Ophthalmic Department.
KING'S COLLEGE (UNIVERSITY OF LONDON).—Demonstrator of Bacteriology.
LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100, with board and lodging.
LONDON HOSPITAL PATHOLOGICAL INSTITUTE.—Director. Salary £500.
LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Honorarium at rate of 50 guineas per annum, with board, residence, &c.
MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board and residence.
MANCHESTER ROYAL INFIRMARY.—Medical Registrar. Salary £70 per annum.
MANCHESTER WORKHOUSE, Crumpsall.—Assistant Medical Officer. Salary £110 per annum, with apartments, fire, light, washing, and attendance.
METROPOLITAN BOROUGH OF BATTERSEA.—Medical Officer of Health. Salary £600 per annum.
METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton-street, Fitzroy-square, W.—Three Clinical Assistants and an Anæsthetist.
NOTTINGHAM GENERAL DISPENSARY.—Two Assistant Resident Surgeons. Salary £160 per annum each, with apartments, attendance, light, and fuel.
PADDINGTON INFIRMARY.—Clinical Assistant and Second Assistant to the Medical Superintendent, unmarried, for six months. Honorarium of £36, with board, lodging, and washing.
QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at rate of £60 per annum, with board, residence, and washing.
QUEEN'S JUBILEE HOSPITAL, Earl's Court, S.W.—Surgical Registrar.
TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 a year, with board and apartments.
WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.
WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and three House Surgeons for six months. Board, lodging, and laundry allowance.
WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Surgical Registrar. Salary £50 per annum.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On Feb. 17th, at Retford, the wife of Hanway R. Bea'e, M.D. Lond., prematurely, of a son.
CHAMBERS.—On Feb. 14th, at Cheriton-gardens, Folkestone, the wife of W. F. Chambers, M.R.C.S., L.R.C.P., of a daughter.
COLBY.—On Feb. 6th, at The Mount, Malton, the wife of J. G. Ernest Colby, M.B., F.R.C.S., of a son.

MARRIAGES.

IRONSIDE BRUCE—RANDLE.—On Feb. 8th, at St. Simon's, Lennox-gardens, by the Rev. H. Baron Dickinson, vicar of St. Stephen's, Lewisham, William John, second son of Dr. and Mrs. Bruce, Dingwall, to Violet, youngest daughter of the late Nathaniel Randle of Bombay, and Mrs. Randle, 25, Morpeth Mansions, S.W.
STUMBLES—PRAIN.—On Feb. 14th, at Blackness House, Dundee, Henry Martyn Stumbles, M.B., to Grace Curror, daughter of John Easton Prain.
TAYLOR—CLARKE TIMPERLEY.—On Feb. 14th, at the parish church, Wimbledon, James George Taylor, M.A., M.D. Cantab., M.R.C.P., to Augusta Mary Clarke Timperley, daughter of the late Thomas Clarke of Cogshall Hall, Cheshire.

DEATHS.

CLARK.—On Feb. 13th, at Rose Hill, Dorking, William Falconer Clark, M.R.C.S., L.S.A., late Medical Staff, H.M. Indian Army, and H.E.I.C., aged 75 years.
COCKS.—On Feb. 16th, at St. James's-square, Bath, Benjamin Cocks, M.R.C.S. Eng., L.R.C.P. Edin., formerly of Buntingford, Herts, aged 73 years.
HEWER.—On Dec. 25th, 1905, at Blackall, Queensland, of dengue fever, Henry John Hewer, M.R.C.S., L.S.A., aged 44 years.
MACKITCHIE.—On Feb. 12th, at 84, High-street, Huntingdon, David MacRitchie, M.B. and C.M., aged 44 years.
MAY.—On Feb. 16th, at Trentis Roe, Parkstone, Harry May, M.D. St. And., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., aged 74 years.
ODLING.—On Feb. 17th, at Teheran, of typhoid fever, Tom Francis Odling, C.M.G., physician to the British Legation in Persia, aged 56 years, son of the late William Odling of Buslingthorpe, Lincs.
ROSS.—On the 15th inst., at her residence, 2, Ladybarn-crescent, Withington, Manchester, Mary Elizabeth, wife of the late James Ross, M.D., F.R.C.P., LL.D., aged 69 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE VEEDEE VIBRATOR.

WE have received from various correspondents a circular and other matter which have been sent to them as medical men by Mr. J. E. Garratt who now states on his own circular that he is the maker and proprietor of the Veedee vibrator. Last year, in the month of September, he was the general wholesale agent. But to return to the circular under consideration. Mr. Garratt is anxious, with a split infinitive, for medical men "to kindly allow me to send you at my expense and free of all charge to you, a 'Veedee Vibrator' (of which enclosed circular gives you particulars), for your inspection, and if convenient for a little test in your practice." Further on Mr. Garratt says: "It is only now with my new model, that I have got the machine really good enough to offer it to medical men." Now, this last is a particularly unfortunate remark, for in September last year—to be exact, on Friday, Sept. 15th—Mr. Garratt arrived at this office by appointment bringing with him the Veedee vibrator. We pointed out to him that it had been, and was being, advertised and puffed in sundry druggists' shops as a cure for most things, and further, that the statements in the explanatory booklet were, to put it mildly, not true. He excused himself by saying that "You know what these American advertisers are," but he implored us just to say that the apparatus was a good one, which we naturally declined to do. But if he has only now got the machine really good enough to offer it to medical men, why did he come in 1905 and wish to offer it to medical men through our columns? The chief interest of the whole circular for ourselves, however, is the matter contained in an attached slip which, despite its heading, we reproduce.

Private and Confidential.

TERMS AND PROFITS TO MEDICAL MEN.

VEEDEE VIBRATOR AND ATTACHMENTS, ETC.

25 per cent. Discount may be deducted by Doctors from the prices in the enclosed List, provided that payment is made within seven days of the date of supply. If not paid within seven days, List prices are strictly net—such net payment being due 30 days after supply.

Special Note.—Any Medical man desiring to prescribe the Veedee Vibrator and Attachments may instruct me to send to the patient direct, and charge to the patient at the List prices. In all such cases I would, immediately I receive the patient's remittance, send 25 per cent. to the Medical man as his profit.

J. E. GARRATT,
124, SOUTHWARK STREET, LONDON, S.E.

Mr. Garratt must have a singular opinion of the members of the medical profession. Commissions are of course a recognised form of bribery in trade but we trust that the day is far distant when medical men will be lured into prescribing an apparatus for their patients which is puffed in the disgraceful manner in which the Veedee vibrator is puffed, or indeed any other drug or appliance, on account of a bribe.

IS BARLEY WATER A SUITABLE FOOD FOR INFANTS?

To the Editors of THE LANCET.

SIRS,—I venture to call your attention to an inconsistency that exists between precept and practice in relation to the feeding of infants. It is generally accepted as a fact that infants are unable to digest starch and yet barley water is very generally employed for diluting the milk of young children. In preparing barley water either the decorticated barley grain or a flour prepared from barley is boiled for a time with water. The decoction so obtained contains a notable proportion of starch, together with albuminoids, sugar, dextrin, saline constituents, and oil, and varies in strength according to the amount of water employed and the extent to which it has been boiled. It is possible to obtain a somewhat opaque decoction which sets on cooling, forming a jelly. Obviously the practice of feeding infants is diametrically opposed to theory and the important question arises as to whether starch in this form is really injurious to infants. From the universality of the custom and the usually beneficial results obtained by this method of feeding there would appear to be no danger in the administration of starch in the form of barley water to young children. Barley water has been chosen as a diluent of milk with the idea that it has the power of breaking up the lumps of casein which separate out from the milk in the stomach. It would be instructive to know the exact way in which this change is brought about. In addition to the constituents named the barley grain contains a ferment in the layer of cells separating the embryo from the reserve of starch material which forms the greater part of the grain. The rôle of this ferment is the conversion of the starch into sugar for the nourishment of the growing embryo. Such ferments are not, however, capable of withstanding high temperatures and it is scarcely possible that this ferment plays a part in the digestion

of the starch in barley water owing to prolonged boiling of the latter. There is another possibility—namely, that milk itself may contain a substance which converts the starch into a form easy of assimilation by infants. But there is no evidence of this. In the present imperfect state of our knowledge of the subject one fact is prominent—viz., that barley water appears to agree very well with infants. It would seem likely, therefore, that the time-honoured *dictum* as to the incapacity of infants to digest starch may not after all be strictly true but that, on the contrary, infants are able to digest a certain amount of starch when it is presented in the form of barley water. The subject is of prime importance because if barley water is really unsuitable for the purpose its use should be discontinued. There are other well-known agents which serve to break up the lumps of casein, notably lime water and sodium bicarbonate and citrate, and one of these substances might in that case be substituted. The opinions of your readers would doubtless throw some light on this interesting subject.

I am, Sirs, yours faithfully,

Feb. 20th, 1906. CURIA.

QUESTIONS ABOUT MOTOR CARS.

To the Editors of THE LANCET.

SIRS,—Can any one of your readers tell me what sort of motor car is best suited for work in town only and whether there is any place where one could find a good selection of second-hand cars?

I am, Sirs, yours faithfully,

Feb. 20th, 1906. MOTOR.

*** The question as to which is the best car for town work depends upon the amount which our correspondent is prepared to expend. If expense is no object there can be no question that the most satisfactory car for town work alone is an electric brougham. With regard to second-hand cars, "Motor" had better pay a visit to Friswell, Limited, 1, Albany-street, N.W., or to the Motor House, 366-368, Euston-road, N.W., or to Automobilia, Limited, 532, Oxford-street, W. Perhaps some of our readers will be able to give "Motor" further information.—ED. L.

DANGEROUS, IF GRAND.

To the Editors of THE LANCET.

SIRS,—A few days ago I was sitting on the top of a motor omnibus, and whilst passing over the railway bridge at Kilburn Station, a train came steaming along, the locomotive of which threw out thousands of red-hot sparks, thus presenting a spectacle somewhat grand, though constituting an unquestionable danger to the community. Anyhow, I had the misfortune to be hit by one of these sparks, which fell into my left eye, in consequence of which I suffered agonies for hours afterwards. Now, I am told that this engine fuel can easily be prevented from bursting out of the funnel whilst the train rushes through town and country, and if so, it is gross negligence on the part of engine drivers and railway authorities to allow this most dangerous practice to continue.

I am, Sirs, yours faithfully,

Hamilton-gardens, N.W., Feb. 20th, 1906. ALGERNON ASHTON.

THE BACTERIOLOGY OF SCARLET FEVER.

H. K. would be obliged to our readers for any references to recent work upon the bacteriology of scarlet fever.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (3rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (26th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Papers:—Dr. S. West: Some Points in the Treatment of Chronic Renal Disease.—Dr. S. Martin: The Diagnosis and Treatment of Acute Tuberculous Pleurisy.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Paper:—Mr. H. B. Gardner: Disorders and Diseases of the Heart in Relation to Anæsthesia for Dental Operations.

TUESDAY (27th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. H. D. Rolleston and Mr. L. Jones: Primary Malignant Disease of the Vermiform Appendix (with epidiascope demonstration).

WEDNESDAY (28th).—SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M. Paper:—Capt. G. S. C. Swinton, L.C.C.: London Traffic.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus, E.C.).—8.30 P.M. Papers:—Dr. W. H. Kelson: Some Throat Affections.—Dr. P. Stewart: What is the Earliest Stage at which we can Diagnose Tabes Dorsalis?—Dr. W. A. Milligan: The Diagnosis of Early Extra-uterine Pregnancy.

THURSDAY (1st).—CHILDHOOD SOCIETY AND THE BRITISH CHILD-STUDY ASSOCIATION (Parkes Museum, Margaret-street, W.).—8 P.M. Lecture:—Miss Miyakawa: Child Life in Japan. (Arranged by the Childhood Society.)

NEUROLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Papers:—Dr. L. S. Dudgeon: Acute Diphtheritic Toxæmia with Special Reference to Acute Cardiac Failure.—Dr. G. Holmes and Mr. J. H. Parsons: The Pathological Anatomy of Amaurotic Family Idiocy.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. Clinical Cases.

FRIDAY (2nd).—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. C. C. Braine: Experience of Anæsthetics in 200 Cases of Prostatectomy.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (26th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Hunterian Lecture:—Prof. A. H. Cheatle: Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique. (Skin). 5.15 P.M. Lecture:—Dr. G. A. Sutherland: Catarrhal Pneumonia in Children.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. C. Williams: Finsen, Ultra-violet, and other Methods of Photo-therapy (illustrated by lantern slides).

TUESDAY (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. L. Williams: Clinique. (Medical.) 5.15 P.M. Lecture:—Mr. H. B. Robinson: Some Unusual Forms of Hernia.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Armour: Pain in Acute Abdominal Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. R. Russell: Subacute Degeneration of Spinal Cord.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Prof. W. Stirling: Food and Nutrition. (Lecture IV.)

WEDNESDAY (28th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Hunterian Lecture:—Prof. A. H. Cheatle: Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (2", Chenies-street, W.C.).—4 P.M. Mr. T. P. Legg: Clinique. (Surgical.) 5.15 P.M. Lecture:—Mr. J. Pardoe: Difficult Micturition and Retention of Urine.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Armour: The Diagnosis in Appendicitis.

UNIVERSITY COLLEGE HOSPITAL (Gower-street, W.C.).—4 P.M. Clinical Lecture:—Mr. B. Pollard: The Methods of Investigation in Surgical Affections of the Kidneys.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration:—Dr. A. Wylie: Pharynx.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Demonstration:—Dr. S. O. Habershon: Clinical Cases.

THURSDAY (1st).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Milroy Lecture:—Dr. W. H. Hamer: Epidemic Disease in England—the Evidence of Variability and of Persistency of Type.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Lecture:—Prof. C. A. Morton (Bristol): Some Cases in which Collections of Stones formed in the Prostatic Urethra.
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.
CHARING CROSS HOSPITAL.—4 P.M. Dr. Bosanquet: Demonstration of Medical Cases. (Post Graduate Course.)
SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Lecture:—Dr. Roberts: Cases from the Wards.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M. Dr. M. Dockrell: Syphilis as it modifies other Eruptions of the Skin, Symptoms, Diagnosis, and Treatment. (Chesterfield Lecture.)
MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Lecture:—Dr. T. D. Lister: Specific Diagnosis and Treatment of Phthisis. (Post-Graduate Course.)
HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Mr. Steward: The Surgical Treatment of Spastic Paraplegia.
ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Mr F. Darwin: The Physiology of Plants. (Lecture I.).

FRIDAY (2nd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Hunterian Lecture:—Prof. A. H. Cheatle: Some Points in the Surgical Anatomy of the Temporal Bone from Birth to Adult Life.
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat.)
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. J. Reece: Food and Disease.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. R. Russell: Cerebral Tumours.
ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—9 P.M. Dr. R. Caton: Hippocrates and the Newly Discovered Health Temple at Cos.

SATURDAY (3rd).—ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—3 P.M. Prof. J. J. Thomson: The Corpuscular Theory of Matter. (Lecture I.)

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

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We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1905, which was completed with the issue of Dec. 30th, were given in THE LANCET of Jan. 6th, 1906.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 22nd, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo	Maximum Temp. in shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 16	29·54	S.W.	0·03	64	52	39	44	45	Overcast
,, 17	29·56	E.	0·24	46	44	43	43	44	Raining
,, 18	29·84	E.	0·24	43	43	40	41	42	Overcast
,, 19	29·72	S.	0·29	53	46	42	41	43	Cloudy
,, 20	29·96	W.	0·12	77	47	37	36	39	Fine
,, 21	30·20	W.	...	76	45	35	35	36	Hazy
,, 22	30·12	S.	...	66	43	34	35	36	Foggy

During the week marked copies of the following newspapers have been received:—*Liverpool Daily Post, Lancashire Post, Manchester Chronicle, Bristol Press, Belfast Newsletter, Leicester Mercury, Glasgow Citizen, Leicester Advertiser, Portsmouth Independent, Newcastle Chronicle, Cardiff Mail, Bury Times, Wolverhampton Counties Express, Manchester Guardian, Glasgow Herald, Surrey Advertiser, &c.*

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